

Author Search

=> FILE CAPLUS

FILE 'CAPLUS' ENTERED AT 15:37:30 ON 07 JUN 2007

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FILE COVERS 1907 - 7 Jun 2007 VOL 146 ISS 24

FILE LAST UPDATED: 6 Jun 2007 (20070606/ED)

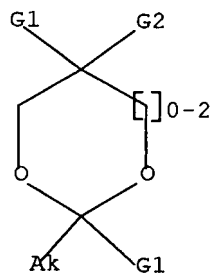
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<http://www.cas.org/infopolicy.html>

'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE

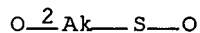
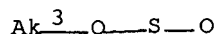
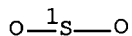
=> D QUE L16

L9 STR

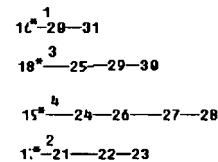
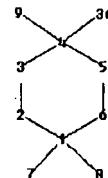
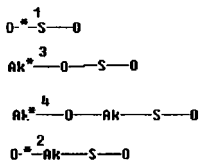
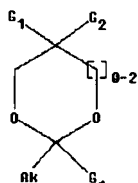


G1 H, Me

G2 [01], [02], [03], [04]



Structure attributes must be viewed using STN Express query preparation:
Uploading strD.str



chain nodes :

7 8 9 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 36

ring nodes :

1 2 3 4 5 6

chain bonds :

1-7 1-8 4-9 4-36 16-20 17-21 18-25 19-24 20-31 21-22 22-23 24-26 25-29
26-27 27-28 29-30

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

exact/norm bonds :

1-2 1-6 1-7 1-8 2-3 3-4 4-5 4-9 4-36 5-6 16-20 17-21 18-25 19-24 20-31
21-22 22-23 24-26 25-29 26-27 27-28 29-30

G1:H,CH3

G2:[*1],[*2],[*3],[*4]

Connectivity :

7:1 E exact RC ring/chain 21:2 E exact RC ring/chain 26:2 E exact RC ring/chain

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 16:CLASS
17:CLASS 18:CLASS 19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS
25:CLASS 26:CLASS
27:CLASS 28:CLASS 29:CLASS 30:CLASS 31:CLASS 36:CLASS

L11 162 SEA FILE=REGISTRY SSS FUL L9
L12 60 SEA FILE=CAPLUS ABB=ON PLU=ON L11
L13 82 SEA FILE=CAPLUS ABB=ON PLU=ON MALLET C?/AU
L14 2477 SEA FILE=CAPLUS ABB=ON PLU=ON RUSSELL R?/AU
L15 20 SEA FILE=CAPLUS ABB=ON PLU=ON YARDLEY K?/AU
L16 1 SEA FILE=CAPLUS ABB=ON PLU=ON (L13 OR L14 OR L15) AND L12

=> D IBIB ED ABS L16 HITSTR 1

L16 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2003:972310 CAPLUS Full-text
 DOCUMENT NUMBER: 140:17749
 TITLE: Destructible surfactants and use in small molecule analysis
 INVENTOR(S): **Mallet, Claude**; Russel, Reb J., II;
Yardley, Kurt
 PATENT ASSIGNEE(S): Waters Investments Limited, USA
 SOURCE: PCT Int. Appl., 45 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003102536	A2	20031211	WO 2003-US16819	20030530
WO 2003102536	A3	20040902		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG AU 2003234681 A1 20031219 AU 2003-234681 20030530 US 2006094000 A1 20060504 US 2005-516419 20050829 PRIORITY APPLN. INFO.: US 2002-385018P P 20020531 WO 2003-US16819 W 20030530				

OTHER SOURCE(S): MARPAT 140:17749

ED Entered STN: 14 Dec 2003

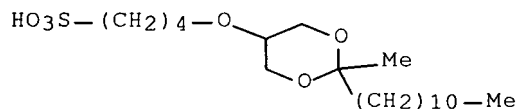
AB The anionic surfactants have a dioxolane or dioxane functional group that enable degradation of the surfactant under acidic conditions. Using the anionic surfactants in a variety of anal. applications relates to samples containing small mols.

IT **308818-10-2P 308818-11-3P**

RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (surfactant; anionic surfactants used in small mol. detection)

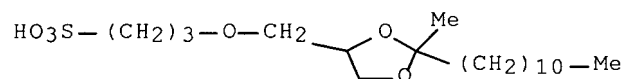
RN 308818-10-2 CAPLUS

CN 1-Butanesulfonic acid, 4-[(2-methyl-2-undecyl-1,3-dioxan-5-yl)oxy]- (9CI)
 (CA INDEX NAME)



RN 308818-11-3 CAPLUS

CN 1-Propanesulfonic acid, 3-[(2-methyl-2-undecyl-1,3-dioxolan-4-yl)methoxy]-
(9CI) (CA INDEX NAME)



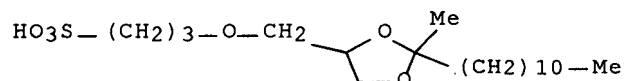
IT 308818-13-5P

RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(surfactant; anionic surfactants used in small mol. detection)

RN 308818-13-5 CAPLUS

CN 1-Propanesulfonic acid, 3-[(2-methyl-2-undecyl-1,3-dioxolan-4-yl)methoxy]-
, sodium salt (9CI) (CA INDEX NAME)

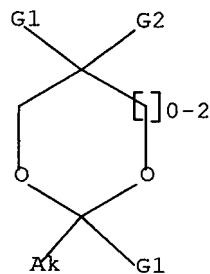


● Na

Serial No.: 10/516,419
Structure Search

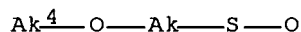
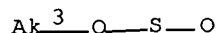
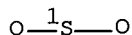
=> D QUE L21

L9 STR



G1 H, Me

G2 [01], [02], [03], [04]



Structure attributes must be viewed using STN Express query preparation.

L11 162 SEA FILE=REGISTRY SSS FUL L9
L12 60 SEA FILE=CAPLUS ABB=ON PLU=ON L11
L17 16 SEA FILE=CAPLUS ABB=ON PLU=ON L12 AND P/DT
L18 14 SEA FILE=CAPLUS ABB=ON PLU=ON L17 AND (PRY<=2003 OR AY<=2003
OR PY<=2003)
L19 44 SEA FILE=CAPLUS ABB=ON PLU=ON L12 NOT L17
L20 34 SEA FILE=CAPLUS ABB=ON PLU=ON L19 AND PY<=2003
L21 48 SEA FILE=CAPLUS ABB=ON PLU=ON (L18 OR L20)

=> S L21 NOT L16

L22 47 L21 NOT L16

=> D IBIB ED ABS HITSTR L22 1-47

L22 ANSWER 1 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:972250 CAPLUS Full-text

DOCUMENT NUMBER: 140:25191

TITLE: Destructible surfactants and uses thereof

INVENTOR(S): Bouvier, Edouard S. P.; Copton, Bruce John; Gebler, John C.; Gilar, Martin; Yu, Ying-Qing; Lee, Peter Jeng Jong; Brown, Elizabeth K.

PATENT ASSIGNEE(S): Waters Investments Limited, USA

SOURCE: PCT Int. Appl., 60 pp.

CODEN: PIXXD2

DOCUMENT TYPE: **Patent**

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003102225	A1	20031211	WO 2003-US16820	20030530 <--
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT,			

TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
 FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2003234682 A1 20031219 AU 2003-234682 20030530 <--

US 2006057659 A1 20060316 US 2005-516418 20050513 <--

PRIORITY APPLN. INFO.: US 2002-385021P P 20020531 <--
 WO 2003-US16820 W 20030530 <--

ED Entered STN: 14 Dec 2003

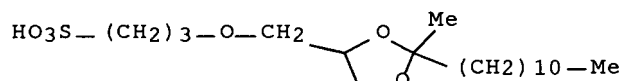
AB The present invention provides methods for enhancing chemical reactions of mols., e.g., biomols., with destructible surfactants. The chemical reactions may involve and/or be associate with anal., e.g., solubilizing, separating, purifying and/or characterizing the mols. In one aspect, the anionic surfactants of the present invention may be selectively broken up at relatively low pH. The resulting breakdown products of the surfactants may be removed from the mol./sample with relative ease. The invention has applicability in a variety of anal. techniques.

IT 308818-13-5P 308818-14-6P

RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
 (destructible surfactants and uses thereof)

RN 308818-13-5 CAPLUS

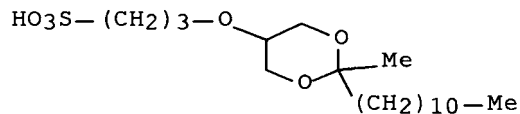
CN 1-Propanesulfonic acid, 3-[(2-methyl-2-undecyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 308818-14-6 CAPLUS

CN 1-Propanesulfonic acid, 3-[(2-methyl-2-undecyl-1,3-dioxan-5-yl)oxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 2 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2003:747140 CAPLUS Full-text
 DOCUMENT NUMBER: 139:377421

TITLE: Enzyme-friendly, mass spectrometry-compatible surfactant for in-solution enzymatic digestion of proteins

AUTHOR(S): Yu, Ying-Qing; Gilar, Martin; Lee, Peter J.; Bouvier, Edouard S. P.; Gebler, John C.

CORPORATE SOURCE: Life Sciences Research and Development, Waters Corporation, Milford, MA, 01757, USA

SOURCE: Analytical Chemistry (2003), 75(21), 6023-6028
CODEN: ANCHAM; ISSN: 0003-2700

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

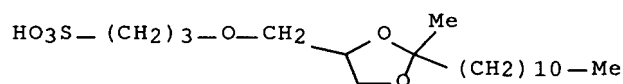
ED Entered STN: 24 Sep 2003

AB Improved in-solution tryptic digestion of proteins in terms of speed and peptide coverage was achieved with the aid of a novel acid-labile anionic surfactant (ALS). Unlike SDS, ALS solubilizes proteins without inhibiting trypsin or other common endopeptidases activity. Trypsin activity was evaluated in the presence of various denaturants; little or no decrease in proteolytic activity was observed in 0.1-1% ALS solns. (w/v). Sample preparation prior to mass spectrometry and liquid chromatog. anal. consists of sample acidification. ALS degrades rapidly at low-pH conditions, which eliminates surfactant-caused interference with anal. Described methodol. combines the advantages of protein solubilization, rapid digestion, high peptide coverages, and easy sample preparation for mass spectrometry and liquid chromatog. analyses.

IT **308818-13-5**
RL: ARU (Analytical role, unclassified); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)
(enzyme-friendly, mass spectrometry-compatible surfactant for in-solution enzymic digestion of proteins)

RN 308818-13-5 CAPLUS

CN 1-Propanesulfonic acid, 3-[(2-methyl-2-undecyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 3 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:590191 CAPLUS Full-text

DOCUMENT NUMBER: 140:42373

TITLE: Improved syntheses of the naturally occurring glycosidase inhibitor salacinol

AUTHOR(S): Ghavami, Ahmad; Sadalapure, Kashinath S.; Johnston, Blair D.; Lobera, Mercedes; Snider, Barry B.; Pinto, B. Mario

CORPORATE SOURCE: Department of Chemistry, Simon Fraser University, Burnaby, BC, V5A 1S6, Can.

SOURCE: Synlett (2003), (9), 1259-1262
 CODEN: SYNLES; ISSN: 0936-5214
 PUBLISHER: Georg Thieme Verlag
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 140:42373
 ED Entered STN: 01 Aug 2003

AB Improved syntheses of the naturally occurring sulfonium ion, salacinol are described. Salacinol is one of the active principles in the aqueous exts. of Salacia reticulata that are traditionally used in Sri Lanka and India for the treatment of Type 2 Diabetes. The synthetic strategy relies on the nucleophilic attack of 2,3,5-tri-O-benzyl- or 2,3,5-tri-O-p-methoxybenzyl-1,4-anhydro-4-thio-D-arabinitol at the least hindered carbon of benzyldiene-protected L-erythritol-1,3-cyclic sulfate in 1,1,1,3,3,3-hexafluoro-2-propanol as solvent. The reactions are compared to those with the benzyl-protected L-erythritol-1,3-cyclic sulfate and also to those in acetone and 2-propanol. Excellent yields are obtained for the reactions with the benzyldiene-protected cyclic sulfate. The synthetic route employing p-methoxybenzyl ether protecting groups is advantageous since all protecting groups in the adduct may be removed with trifluoroacetic acid to yield salacinol, thereby obviating the problematic deprotection of benzyl ethers by hydrogenolysis.

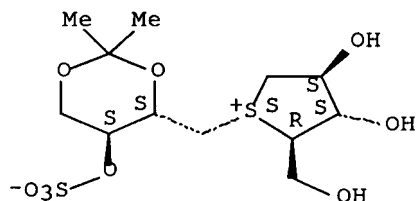
IT 438576-21-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (improved preparation of salacinol exploiting the solvent effects of 1,1,1,3,3,3-hexafluoroisopropanol and using p-methoxybenzyl ether protecting groups)

RN 438576-21-7 CAPLUS

CN D-Arabinitol, 1,4-dideoxy-1,4-[(S)-[[[(4S,5S)-2,2-dimethyl-5-(sulfooxy)-1,3-dioxan-4-yl]methyl]episulfoniumylidene]-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 4 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2003:346818 CAPLUS Full-text

DOCUMENT NUMBER: 138:323055

TITLE: Manufacture of novel sulfate salts of cis- and trans-2-alkyl-5-hydroxy-1,3-dioxanes

INVENTOR(S): Piasecki, Andrzej; Burczyk, Bogdan; Sokolowski, Adam; Kotlewska, Urszula

PATENT ASSIGNEE(S): Politechnika Wroclawska, Pol.

SOURCE: Pol., 6 pp.

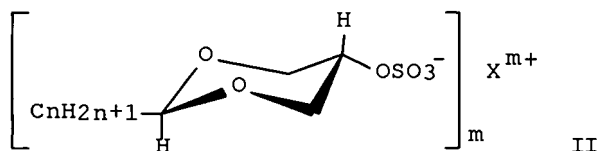
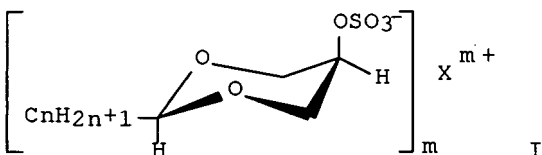
CODEN: POXXA7

DOCUMENT TYPE: Patent

LANGUAGE: Polish

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PL 177120	B1	19990930	PL 1995-308929	19950602 <--
PRIORITY APPLN. INFO.: OTHER SOURCE(S): MARPAT 138:323055			PL 1995-308929	19950602 <--
ED Entered STN: 08 May 2003				
GI				



AB Surface-active title salts (I and II; X = Li, K, Cs, Mg, Ca, Ba, ammonium, pyridinium; m = 1, 2; n = 7-13) were manufactured by reacting the parent cis- and/or trans-2-(C7-13-alkyl)-5-hydroxy-1,3-dioxanes with ClSO₃H in CCl₄ in the presence of pyridine, or with SO₃/pyridine complex, then removing the solvent and neutralizing the residue with aqueous alc. solution or suspension of alkali metal or alkaline earth metal hydroxide, carbonate or bicarbonate, or NH₄OH. For example, adding 0.0464 mol of SO₃/pyridine complex at ambient temperature in portions to a stirred solution of 0.0387 mol of a mixture of cis- and trans-2-undecyl-5-hydroxy-1,3-dioxane in 0.070 dm³ CCl₄ and 2 + 10-3 dm³ pyridine, stirring the mixture for 1 h at ambient temperature and 6-8 h at .apprx.310°K gave 89% mol.% of a mixture of cis- and trans-2-undecyl-1,3-dioxane-5-sulfate pyridinium salts, m. 372-376°K and having Krafft point <293° (1% aqueous solution).

IT 512203-78-0P 512203-80-4P 512203-82-6P
512203-84-8P 512203-86-0P

RL: IMF (Industrial manufacture); PREP (Preparation)

(cis- and trans-isomer mixture; manufacture of novel sulfate salts of cis- and trans-alkyl(hydroxy)dioxanes)

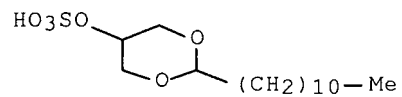
RN 512203-78-0 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, compd. with pyridine (1:1)
(9CI) (CA INDEX NAME)

CM 1

CRN 512203-77-9

CMF C15 H30 O6 S



CM 2

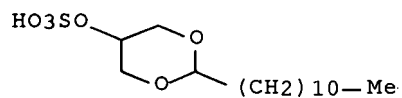
CRN 110-86-1

CMF C5 H5 N



RN 512203-80-4 CAPLUS

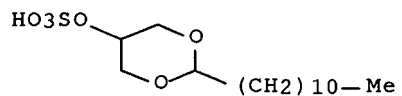
CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

RN 512203-82-6 CAPLUS

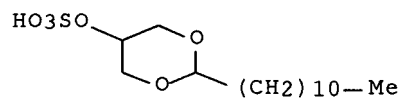
CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, magnesium salt (9CI) (CA INDEX NAME)



●1/2 Mg

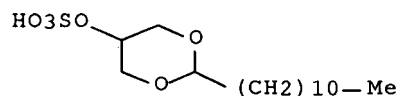
RN 512203-84-8 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, barium salt (9CI) (CA INDEX NAME)



● 1/2 Ba

RN 512203-86-0 CAPLUS
CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, ammonium salt (9CI) (CA INDEX NAME)



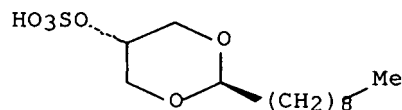
● NH3

IT 259738-92-6P 259738-94-8P 512203-89-3P
512204-29-4P

RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of novel sulfate salts of cis- and trans-alkyl(hydroxy)dioxanes)

RN 259738-92-6 CAPLUS
CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, potassium salt, trans- (9CI)
(CA INDEX NAME)

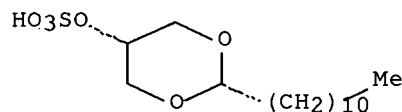
Relative stereochemistry.



● K

RN 259738-94-8 CAPLUS
CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, potassium salt, cis- (9CI)
(CA INDEX NAME)

Relative stereochemistry.

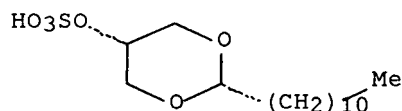


● K

RN 512203-89-3 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, lithium salt, cis- (9CI)
(CA INDEX NAME)

Relative stereochemistry.

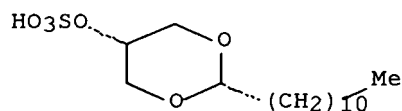


● Li

RN 512204-29-4 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, cesium salt, cis- (9CI)
(CA INDEX NAME)

Relative stereochemistry.



● Cs

L22 ANSWER 5 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:237291 CAPLUS Full-text

DOCUMENT NUMBER: 140:2466

TITLE: Sodium dodecyl sulfate versus acid-labile surfactant gel electrophoresis: Comparative proteomic studies on rat retina and mouse brain

AUTHOR(S): Konig, Simone; Schmidt, Oliver; Rose, Karin; Thanos, Solon; Besselmann, Michael; Zeller, Martin

CORPORATE SOURCE: Integrated Functional Genomics, Interdisciplinary Clinical Research Center, University Eye Hospital Munster, University of Munster, Germany

SOURCE: Electrophoresis (2003), 24(4), 751-756

CODEN: ELCTDN; ISSN: 0173-0835

PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
 DOCUMENT TYPE: Journal
 LANGUAGE: English

ED Entered STN: 27 Mar 2003

AB A long-chain derivative of 1,3-dioxolane sodium propyloxy sulfate, with similar denaturing and electrophoretic properties as SDS, and facilitated protein identification following polyacrylamide gel electrophoresis (PAGE) for Coomassie-stained protein bands, has been tested. Comparative acid-labile surfactant/sodium dodecyl sulfate two-dimensional (ALS/SDS 2-D)-PAGE expts. of lower abundant proteins from the proteomes of regenerating rat retina and mouse brain show that peptide recovery for mass spectrometry (MS) mapping is significantly enhanced using ALS leading to more successful database searches. ALS may influence some procedures in proteomic anal. such as the determination of protein content and methods need to be adjusted to that effect. The promising results of the use of ALS in bioanalytics call for detailed physicochem. investigations of surfactant properties.

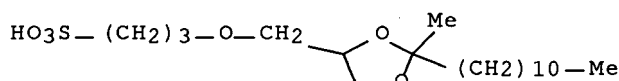
IT 308818-13-5

RL: ARU (Analytical role, unclassified); NUU (Other use, unclassified);
 ANST (Analytical study); USES (Uses)

(comparative proteomic studies on rat retina and mouse brain using SDS
 vs. acid-labile surfactant gel electrophoresis)

RN 308818-13-5 CAPLUS

CN 1-Propanesulfonic acid, 3-[(2-methyl-2-undecyl-1,3-dioxolan-4-yl)methoxy]-
 , sodium salt (9CI) (CA INDEX NAME)



● Na

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 6 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:72137 CAPLUS Full-text

DOCUMENT NUMBER: 138:238141

TITLE: Novel Iminium Ion Equivalents Prepared through C-H
 Oxidation for the Stereocontrolled Synthesis of
 Functionalized Propargylic Amine Derivatives

AUTHOR(S): Fleming, James J.; Fiori, Kristin Williams; Du Bois,
 J.

CORPORATE SOURCE: Department of Chemistry, Stanford University,
 Stanford, CA, 94305-5080, USA

SOURCE: Journal of the American Chemical Society (2003
), 125(8), 2028-2029

CODEN: JACSAT; ISSN: 0002-7863

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 138:238141

ED Entered STN: 30 Jan 2003

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Access to stereochem. complex, polyfunctionalized amine derivs. is made possible using novel oxathiazinane N,O-acetals, e.g. I and II, as starting materials. These heterocycles are prepared via intramol. sulfamate ester C-H insertion with a Rh²⁺-carboxylate catalyst and PhI(OAc)₂ as the terminal oxidant. Such compds. function as unique iminium ion equivalent to which nucleophilic alkynylzinc reagents add smoothly in the presence of BF₃•OEt₂. The coupled products, e.g. III and IV, are isolated in high yield (63-92%) and with good levels of diastereoselection (6-20:1). The alkyne-substituted oxathiazinanes serve as versatile building blocks and may be further manipulated through nucleophilic ring-opening reactions of the sulfamate core. The efficient construction of the 1,7,8-trihydroxyindolizidine V in six steps and in 34% overall yield highlights the power of these combined methods for synthesis.

IT **501683-48-3P**

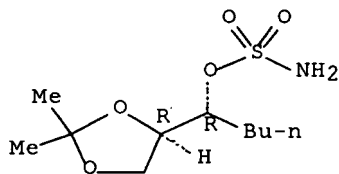
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(stereoselective preparation of propargylic amines via alkynylation of oxathiazinane acetals prepared by Rh-catalyzed cyclization of sulfamate esters)

RN 501683-48-3 CAPLUS

CN Sulfamic acid, (1R)-1-[(4R)-2,2-dimethyl-1,3-dioxolan-4-yl]pentyl ester, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 7 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:577434 CAPLUS Full-text

DOCUMENT NUMBER: 137:291147

TITLE: Identification of proteins from two-dimensional polyacrylamide gels using a novel acid-labile surfactant

AUTHOR(S): Ross, Andrew R. S.; Lee, Peter J.; Smith, Duncan L.; Langridge, James I.; Whetton, Anthony D.; Gaskell, Simon J.

CORPORATE SOURCE: Plant Biotechnology Institute, National Research Council of Canada, Saskatoon, SK, S7N 0W9, Can.

SOURCE: Proteomics (2002), 2(7), 928-936

CODEN: PROTC7; ISSN: 1615-9853

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 04 Aug 2002

AB Protein identification by peptide mass mapping usually involves digestion of gel-separated proteins with trypsin, followed by mass measurement of the resulting peptides by matrix-assisted laser desorption/ionization mass spectrometry (MALDI-MS). Pos. identification requires measurement of enough peptide masses to obtain a definitive match with sequence information recorded in protein or DNA sequence databases. However, competitive binding and ionization of residual surfactant introduced during PAGE (PAGE) can inhibit solid-phase extraction and MS anal. of tryptic peptides. We have evaluated a novel, acid-labile surfactant (ALS) as an alternative to sodium dodecylsulfate (SDS) for two-dimensional (2-D) PAGE separation and MALDI-MS mapping of proteins. ALS was substituted for SDS at the same concentration in buffers and gels used for 2-D PAGE. Manual and automated procedures for spot cutting and in-gel digestion were used to process Coomassie stained proteins for MS anal. Results indicate that substituting ALS for SDS during PAGE can significantly increase the number of peptides detected by MALDI-MS, especially for proteins of relatively low abundance. This effect is attributed to decomposition of ALS under acidic conditions during gel staining, destaining, peptide extraction and MS sample preparation. Automated excision and digestion procedures reduce contamination by keratin and other impurities, further enhancing MS identification of gel separated proteins.

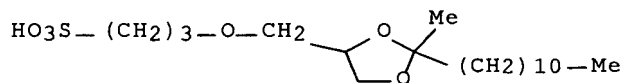
IT **308818-13-5P**

RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(identification of proteins from two-dimensional polyacrylamide gels using novel acid-labile surfactant)

RN 308818-13-5 CAPLUS

CN 1-Propanesulfonic acid, 3-[(2-methyl-2-undecyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 8 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:480012 CAPLUS Full-text

DOCUMENT NUMBER: 137:63418

TITLE: Cyclic sulfonium compounds including salacinol as glucosidase inhibitors and their preparation

INVENTOR(S): Hashimoto, Hironobu; Yuasa, Hideya; Takada, Jun

PATENT ASSIGNEE(S): Rikogaku Shinkokai, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE: **Patent**

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002179673	A	20020626	JP 2000-379453	20001213 <--
PRIORITY APPLN. INFO.:			JP 2000-379453	20001213 <--
OTHER SOURCE(S):		CASREACT 137:63418		

ED Entered STN: 26 Jun 2002

AB A process for preparation of cyclic sulfonium compds., useful as glucosidase inhibitors for treatment of diabetes, comprises (1) preparation of erythritol cyclic sulfate from D- or L-glucose, (2) preparation of compds. having a cyclic structure containing 4 C atoms and 1 S atom from D-xylose, (3) coupling of the product of (1) with the product of (2), and optionally (4) deprotection of OH-protecting group. Cyclic sulfonium compds. may also prepared by treating the product of (2) with alkyl halides. Detailed reaction schemes for every step are also described. 1,4-Epithio-D-arabinitol (I) was prepared in 17% yield from D-xylose with 9 steps. 1,3-O-isopropylidene-D-erythritol cyclic sulfate (II) was prepared in 30% yield from D-glucose with 5 steps. I was reacted with II through ring opening and the coupled product was deprotected to give salacinol in 45%. I was also reacted with MeI to give its S-Me derivative iodide, which inhibited glucosidase at IC₅₀ 0.3 mM.

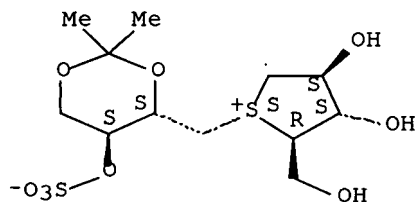
IT 438576-21-7P

RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of cyclic sulfonium compds. such as salacinol as glucosidase inhibitors from glucose and xylose)

RN 438576-21-7 CAPLUS

CN D-Arabinitol, 1,4-dideoxy-1,4-[(S)-[[[(4S,5S)-2,2-dimethyl-5-(sulfooxy)-1,3-dioxan-4-yl]methyl]episulfoniumylidene]-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L22 ANSWER 9 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:59114 CAPLUS Full-text

DOCUMENT NUMBER: 136:249430

TITLE: Winsor-type microemulsions stabilized by mixtures of surfactants

AUTHOR(S): Zielonka, Barbara; Sokolowski, Adam

CORPORATE SOURCE: Wroclaw University of Technology, Wroclaw, Pol.

SOURCE: World Surfactants Congress, 5th, Firenze, Italy, May 29-June 2, 2000 (2000), 852-860. Comite
Europeen des Agents de Surface et leurs Intermediaires
Organiques: Brussels, Belg.
CODEN: 69BYUW

DOCUMENT TYPE: Conference; (computer optical disk)

LANGUAGE: English

ED Entered STN: 23 Jan 2002

AB We have undertaken investigations upon the behavior in Winsor microemulsion systems of surfactant mixts. Sodium n-alkyl sulfates, sulfonates, carboxylates, acetal-type surfactants and fluorinated amphiphiles-sodium carboxylate, fluorinated sugar-type derivative were used as addnl. surface-active agents, called "second surfactants". They were added to systems containing n-heptane, water, sodium diethylhexylsulfosuccinate (AOT) and NaCl in order to obtain transition from water-in-oil microemulsions (Winsor II) to oil-in-water ones (Winsor I). From interfacial tension measurements we determined the regions where Winsor I, Winsor II, and Winsor III occur and calculated the standard free energy of transition, ΔG_{tr} , from the Winsor I to the Winsor III system. Addnl., the ΔG_{tr} contributions derived from all structural parts of the second surfactant mol., i.e. CH_2 , CF_2 , head group, were estimated

IT 139888-69-0 139888-70-3 139888-72-5
186189-03-7 186189-04-8 186189-05-9
186189-06-0

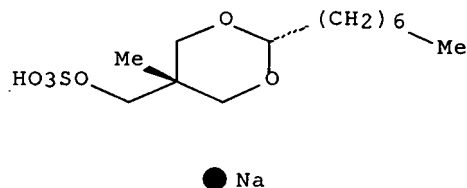
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(Winsor-type microemulsions stabilized by mixts. of surfactants)

RN 139888-69-0 CAPLUS

CN 1,3-Dioxane-5-methanol, 2-heptyl-5-methyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA INDEX NAME)

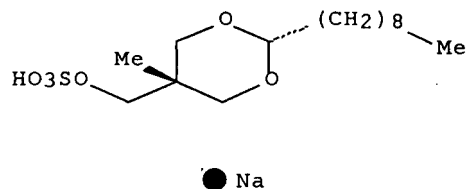
Relative stereochemistry.



RN 139888-70-3 CAPLUS

CN 1,3-Dioxane-5-methanol, 5-methyl-2-nonyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA INDEX NAME)

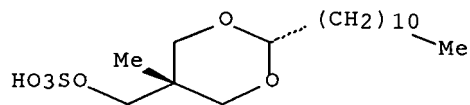
Relative stereochemistry.



RN 139888-72-5 CAPLUS

CN 1,3-Dioxane-5-methanol, 5-methyl-2-undecyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.

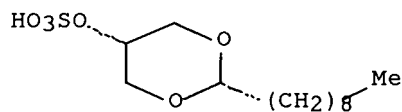


● Na

RN 186189-03-7 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.

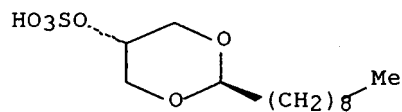


● Na

RN 186189-04-8 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, sodium salt, trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.

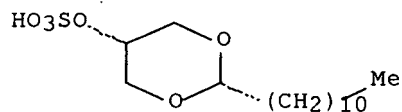


● Na

RN 186189-05-9 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA INDEX NAME)

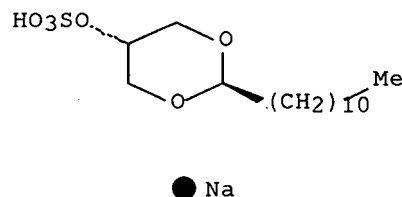
Relative stereochemistry.



● Na

RN 186189-06-0 CAPLUS
 CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, sodium salt, trans- (9CI)
 (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 10 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:812359 CAPLUS Full-text

DOCUMENT NUMBER: 136:167579

TITLE: Synthesis of a nitrogen analogue of salacinol and its α -glucosidase inhibitory activity

AUTHOR(S): Muraoka, Osamu; Ying, Shao; Yoshikai, Kazuya; Matsuura, Yoshiharu; Yamada, Eriko; Minematsu, Toshie; Tanabe, Genzoh; Matsuda, Hisashi; Yoshikawa, Masayuki
 CORPORATE SOURCE: School of Pharmaceutical Sciences, Kinki University, Osaka, 577-8502, Japan

SOURCE: Chemical & Pharmaceutical Bulletin (2001), 49(11), 1503-1505

CODEN: CPBTAL; ISSN: 0009-2363

PUBLISHER: Pharmaceutical Society of Japan

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 136:167579

ED Entered STN: 08 Nov 2001

AB A nitrogen analog of the naturally occurring sulfonium ion salacinol, a potent α -glucosidase inhibitor isolated from the Ayurvedic medicine Salacia reticulata, was synthesized and its inhibitory activity against α -glucosidase tested. Substitution of the sulfur atom in salacinol with a nitrogen reduced the activity considerably. The solid-state stereostructure of the related compound 1'-(1-pyrrolidiniumyl)-2',4'-O- isopropylidene-1'-deoxy-L-erythritol-3'-sulfate was determined on the basis of single crystal X-ray measurement.

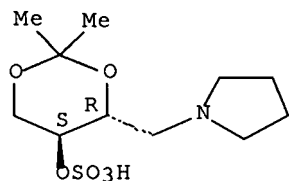
IT **396073-85-1P**

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (crystal structure of; synthesis of a nitrogen analog of salacinol and its α -glucosidase inhibitory activity)

RN 396073-85-1 CAPLUS

CN 1,3-Dioxan-5-ol, 2,2-dimethyl-4-(1-pyrrolidinylmethyl)-, hydrogen sulfate (ester), (4R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

IT **396073-88-4P**

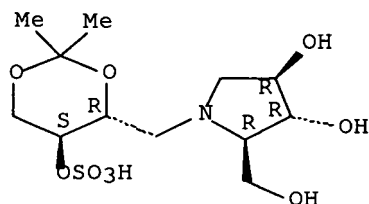
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(synthesis of a nitrogen analog of salacinol and its α -glucosidase inhibitory activity)

RN 396073-88-4 CAPLUS

CN 3,4-Pyrrolidinediol, 1-[[(4R,5S)-2,2-dimethyl-5-(sulfooxy)-1,3-dioxan-4-yl]methyl]-2-(hydroxymethyl)-, (2R,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 11 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:699311 CAPLUS Full-text

DOCUMENT NUMBER: 136:202175

TITLE: Decomposition properties of sodium 3-[(2-alkyl-1,3-dioxolan-4-yl)methoxyl]-1-propanesulfonates

AUTHOR(S): Zhu, Hong-jun; Wang, Jin-tang; Xu, Feng

CORPORATE SOURCE: School of Science, Nanjing University of Chemical Technology, Nanjing, 210009, Peop. Rep. China

SOURCE: Jingxi Huagong (2001), 18(8), 443-444, 460

CODEN: JIHUFJ; ISSN: 1003-5214

PUBLISHER: Jingxi Huagong Bianjibu

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

ED Entered STN: 26 Sep 2001

AB The decomposition properties of sodium 3-[(2-alkyl-1,3-dioxolan-4-yl)methoxyl]-1-propanesulfonates [alkyl = heptyl (HDMPS), nonyl (NDMPS), undecyl (UDMPS)] in 0.1 mol/L HCl solution (25°) were measured by gas chromatog. The kinetics investigation showed that the decomposition reaction of these surfactants is pseudo-first-order. Their rate constant k and half-life $t_{1/2}(h)$: HDMPS 0.638, NDMPS 0.827, UDMPS 0.936.

IT **333952-53-7 333952-54-8 333952-55-9**

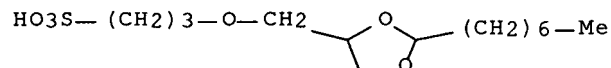
RL: PRP (Properties); RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)

(decomposition properties of sodium 3-[(2-alkyl-1,3-dioxolan-4-yl)methoxy]-

1-propanesulfonates as anionic surfactants)

RN 333952-53-7 CAPLUS

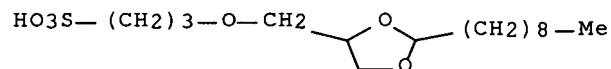
CN 1-Propanesulfonic acid, 3-[(2-heptyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 333952-54-8 CAPLUS

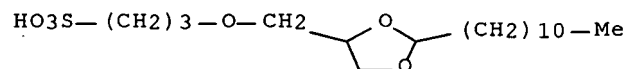
CN 1-Propanesulfonic acid, 3-[(2-nonyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 333952-55-9 CAPLUS

CN 1-Propanesulfonic acid, 3-[(2-undecyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

L22 ANSWER 12 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:865356 CAPLUS Full-text

DOCUMENT NUMBER: 134:29655

TITLE: Method for preparation of diglycerin from diglycerin ketal of acetal derivatives

INVENTOR(S): Murata, Daiya; Imanaka, Takehiro; Nagumo, Hiroshi

PATENT ASSIGNEE(S): Kao Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

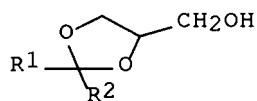
DOCUMENT TYPE: **Patent**

LANGUAGE: Japanese

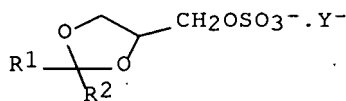
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

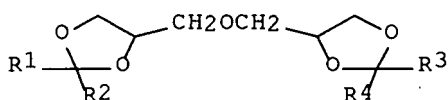
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000344705	A	20001212	JP 1999-157970	19990604 <--
PRIORITY APPLN. INFO.:			JP 1999-157970	19990604 <--
OTHER SOURCE(S):			CASREACT 134:29655; MARPAT 134:29655	
ED Entered STN: 12 Dec 2000				
GI				



I



II



III

AB Diglycerin, HOCH₂CH(OH)OCH₂CH(OH)CH₂OH, is prepared by reaction of glycerin ketal or acetal (I; R₁, R₂ = H, hydrocarbyl; or R₁ and R₂ are linked to each other to form a carbo cyclic ring) glycerin ketal or acetal sulfate salt (II; R₃, R₄ = H, hydrocarbyl; or R₃ and R₄ are linked to each other to form a carbo cyclic ring; Y⁺ = salt-forming cation) to give diglycerin ketal or acetal (III; R₁, R₂, R₃, R₄ = H, hydrocarbyl; or R₁ and R₂ or R₃ and R₄ are linked to each other to form a carbo cyclic ring) followed by deacetalization or deketalization. This process gives diglycerin of high purity which is useful as food additive or an intermediate for nonionic surfactants. Thus, 116.9 g glycerin Me Et ketone ketal, 20 mL pyridine, and 500 mL CCl₄ were heated to 45° in a flask, followed by adding portionwise 127.3 g SO₃-pyridine complex over a period of 3 h, and the resulting mixture was neutralized by adding 66.7 g 48% aqueous NaOH, 260 g H₂O, and 900 g ethanol and evaporated to remove the solvent to give 219.9 g II (R₃ = Et, R₄ = Me, Y⁺ = Na⁺). The latter product and 116.9 g glycerin Me Et ketone ketal were added to a flask, followed by adding 66.7 g 48% aqueous NaOH and 650 mL xylene, and the resulting mixture was refluxed for etherification with azeotropic removal of water for 16 h to give 97.9 g III (R₁ = R₃ = Et, R₂ = R₄ = Me). The latter compound (60 g) was treated with p-toluenesulfonic acid and 3-5% steam per h was introduced with removing excess steam and Me Et ketone outside the system for 5 h and the resulting mixture was dehydrated at 90° and 6.66 kPa for 0.5 to give 41.0 g diglycerin (97.9% purity).

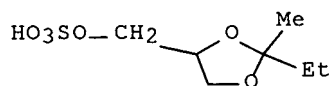
IT **311820-48-1P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of diglycerin by etherification diglycerin ketal or acetal and its sulfate and deacetalization or deketalization of diglycerin ketal or acetal)

RN 311820-48-1 CAPLUS

CN 1,3-Dioxolane-4-methanol, 2-ethyl-2-methyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



● Na

L22 ANSWER 13 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:835474 CAPLUS Full-text

DOCUMENT NUMBER: 134:297503

TITLE: Preparation of degradable sulfonate surfactants

AUTHOR(S): Zhu, Hong-jun; Wang, Jin-tang; Xu, Feng; Kong, Ai-wu

CORPORATE SOURCE: Department of Allied Chemistry, Nanjing University of Chemical Technology, Nanjing, 210009, Peop. Rep. China

SOURCE: Jingxi Huagong (2000), 17(10), 559-561, 566

CODEN: JIHUFJ; ISSN: 1003-5214

PUBLISHER: Jingxi Huagong Bianjibu

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

ED Entered STN: 30 Nov 2000

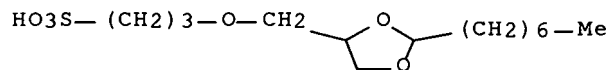
AB A series of degradable sulfonate surfactants(III) {sodium 3-[(2-heptyl-1,3-dioxolan-4-yl) methoxy]-1-propanesulfonate; sodium 3-[(2-nonyl-1,3-dioxolan-4-yl) methoxy]-1-propanesulfonate; sodium 3-[(undecyl-1,3-dioxolan-4-yl) methoxy]-1-propanesulfonate} with 1,3-dioxolane ring were prepared by three steps. (a) a series of acetals (I) were prepared by reaction of aldehydes and tri-Et orthoformate at 8-10° under the catalysis of ammonium nitrate (50% yield), (b) the cyclic glycerol acetals(II) were prepared by transacetalation of I with glycerol at 110° (80% yield), (c) then the intermediates II reacted with inner ester of 3-hydroxypropanesulfonic acid and sodium hydroxide at 60-65° for 8 h to give III (90% yield). The structure identification was performed using elementary anal., IR and ¹HNMR.

IT 333952-53-7P 333952-54-8P 333952-55-9P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(degradable sulfonate surfactants; preparation of)

RN 333952-53-7 CAPLUS

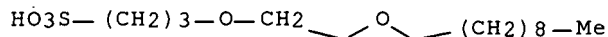
CN 1-Propanesulfonic acid, 3-[(2-heptyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 333952-54-8 CAPLUS

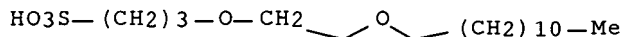
CN 1-Propanesulfonic acid, 3-[(2-nonyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 333952-55-9 CAPLUS

CN 1-Propanesulfonic acid, 3-[(2-undecyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

L22 ANSWER 14 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:824508 CAPLUS Full-text

DOCUMENT NUMBER: 134:2339

TITLE: Destructible surfactants and uses thereof

INVENTOR(S): Lee, Peter Jeng Jong; Compton, Bruce J.

PATENT ASSIGNEE(S): Waters Investments Ltd., USA

SOURCE: PCT Int. Appl., 50 pp.

CODEN: PIXXD2

DOCUMENT TYPE: **Patent**

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000070334	A1	20001123	WO 2000-US13028	20000512 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2000048435	A	20001205	AU 2000-48435	20000512 <--
EP 1181537	A1	20020227	EP 2000-930651	20000512 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
PRIORITY APPLN. INFO.:			US 1999-134113P	P 19990514 <--
			WO 2000-US13028	W 20000512 <--

OTHER SOURCE(S): MARPAT 134:2339

ED Entered STN: 24 Nov 2000

AB Destructible surfactants and methods of using same are provided. The invention includes anionic surfactants having a dioxolane or dioxane functional group which enables the surfactant to be broken down under acidic

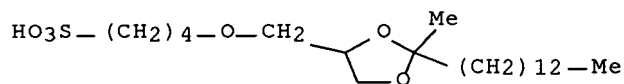
conditions. The invention also includes methods of making anionic surfactants and methods of using anionic surfactants in a variety of applications.

IT **138487-18-0 308818-17-9**

RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(destructible surfactants and uses thereof)

RN 138487-18-0 CAPLUS

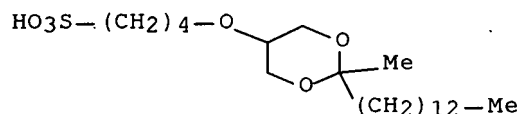
CN 1-Butanesulfonic acid, 4-[(2-methyl-2-tridecyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 308818-17-9 CAPLUS

CN 1-Butanesulfonic acid, 4-[(2-methyl-2-tridecyl-1,3-dioxan-5-yl)oxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

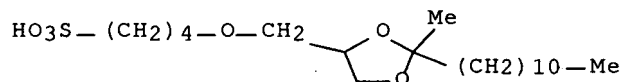
IT **138487-16-8P 308818-10-2P 308818-11-3P**

308818-13-5P 308818-14-6P 308818-15-7P

RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(destructible surfactants and uses thereof)

RN 138487-16-8 CAPLUS

CN 1-Butanesulfonic acid, 4-[(2-methyl-2-undecyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)

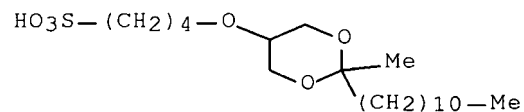


● Na

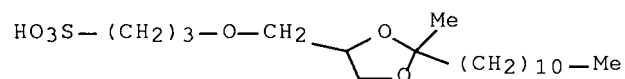
RN 308818-10-2 CAPLUS

CN 1-Butanesulfonic acid, 4-[(2-methyl-2-undecyl-1,3-dioxan-5-yl)oxy]- (9CI)

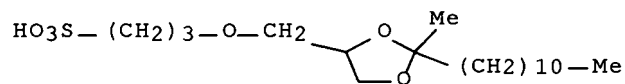
(CA INDEX NAME)



RN 308818-11-3 CAPLUS

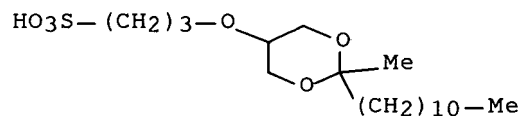
CN 1-Propanesulfonic acid, 3-[(2-methyl-2-undecyl-1,3-dioxolan-4-yl)methoxy]-
(9CI) (CA INDEX NAME)

RN 308818-13-5 CAPLUS

CN 1-Propanesulfonic acid, 3-[(2-methyl-2-undecyl-1,3-dioxolan-4-yl)methoxy]-
, sodium salt (9CI) (CA INDEX NAME)

● Na

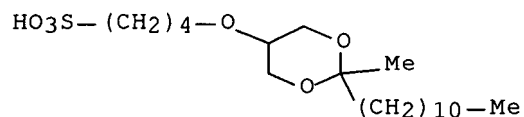
RN 308818-14-6 CAPLUS

CN 1-Propanesulfonic acid, 3-[(2-methyl-2-undecyl-1,3-dioxan-5-yl)oxy]-,
sodium salt (9CI) (CA INDEX NAME)

● Na

RN 308818-15-7 CAPLUS

CN 1-Butanesulfonic acid, 4-[(2-methyl-2-undecyl-1,3-dioxan-5-yl)oxy]-,
sodium salt (9CI) (CA INDEX NAME)



● Na

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 15 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:564534 CAPLUS Full-text

DOCUMENT NUMBER: 133:310063

TITLE: Synthesis of salacinol

AUTHOR(S): Yuasa, H.; Takada, J.; Hashimoto, H.

CORPORATE SOURCE: Graduate School of Bioscience and Biotechnology,
Department of Life Science, Tokyo Institute of
Technology, Yokohama, 226-8501, Japan

SOURCE: Tetrahedron Letters (2000), 41(34),
6615-6618

CODEN: TELEAY; ISSN: 0040-4039

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 133:310063

ED Entered STN: 16 Aug 2000

AB Salacinol, a new type of α -glucosidase inhibitor discovered from the antidiabetic herb, *Salacia reticulata*, was synthesized for the first time. Under the strategy that salacinol would be synthesized by the coupling reaction between 1,4-epithio-D-arabinitol and the cyclic sulfate of an erythritol derivative, the model coupling reactions between tetrahydrothiophene and versatile cyclic sulfate derivs. were undertaken. These expts. indicated that the 1,3-diol of the cyclic sulfate should be protected with the isopropylidene group, otherwise, even the benzylidene-protected cyclic sulfate decomposed during the reaction. Thus, the salacinol was synthesized using the cyclic sulfate of 1,3-O-isopropylidene-D-erythritol. The resulting coupling product was deisopropylidenated to afford salacinol. A diastereomer of salacinol was also synthesized.

IT 302579-07-3P 302579-09-5P 302579-10-8P

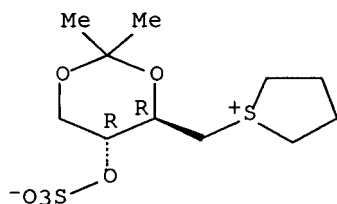
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of salacinol by coupling of epithioarabinitol with cyclic sulfate of isopropylidene-D-erythritol)

RN 302579-07-3 CAPLUS

CN Thiophenium, 1-[[[(4R,5R)-2,2-dimethyl-5-(sulfooxy)-1,3-dioxan-4-yl]methyl]tetrahydro-, inner salt (9CI) (CA INDEX NAME)

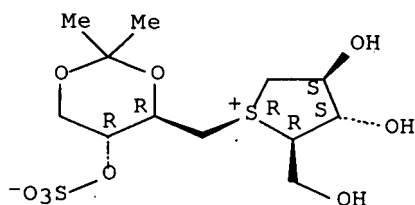
Absolute stereochemistry. Rotation (-).



RN 302579-09-5 CAPLUS

CN D-Arabinitol, 1,4-dideoxy-1,4-[(R)-[[(4R,5R)-2,2-dimethyl-5-(sulfooxy)-1,3-dioxan-4-yl]methyl]episulfoniumylidene]-, inner salt (9CI) (CA INDEX NAME)

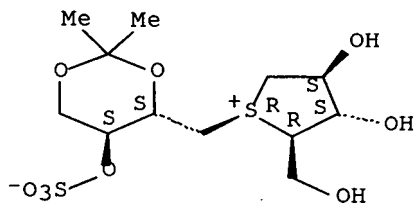
Absolute stereochemistry.



RN 302579-10-8 CAPLUS

CN D-Arabinitol, 1,4-dideoxy-1,4-[(R)-[[(4S,5S)-2,2-dimethyl-5-(sulfooxy)-1,3-dioxan-4-yl]methyl]episulfoniumylidene]-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:

9

THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 16 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

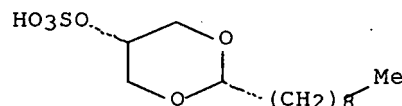
ACCESSION NUMBER: 2000:270652 CAPLUS Full-text

DOCUMENT NUMBER: 133:336886

TITLE: Synthesis and surface properties of chemodegradable anionic surfactants: diastereomeric (2-n-alkyl-1,3-dioxan-5-yl) sulfates with monovalent counter-ions. [Erratum to document cited in CA132:196127]

AUTHOR(S): Piasecki, Andrzej; Mayhew, Alexandra
 CORPORATE SOURCE: Institute of Organic and Polymer Technology, Wroclaw
 University of Technology, Wroclaw, 50-370, Pol.
 SOURCE: Journal of Surfactants and Detergents (2000
), 3(2), 237
 CODEN: JSDEFL; ISSN: 1097-3958
 PUBLISHER: AOCS Press
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 ED Entered STN: 26 Apr 2000
 AB The captions for Figs. 2 and 3 were switched; the corrected figures and their
 corresponding captions are given.
 IT **186189-03-7P 186189-04-8P 186189-05-9P**
186189-06-0P 259738-90-4P 259738-91-5P
259738-92-6P 259738-93-7P 259738-94-8P
259738-95-9P 259738-96-0P 259738-97-1P
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or
 engineered material use); PREP (Preparation); USES (Uses)
 (synthesis and surface properties of chemodegradable diastereomeric
 (alkyldioxanyl) sulfate anionic surfactants with monovalent
 counter-ions (Erratum))
 RN 186189-03-7 CAPLUS
 CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA
 INDEX NAME)

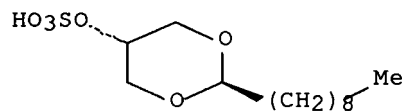
Relative stereochemistry.



● Na

RN 186189-04-8 CAPLUS
 CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, sodium salt, trans- (9CI)
 (CA INDEX NAME)

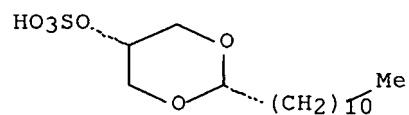
Relative stereochemistry.



● Na

RN 186189-05-9 CAPLUS
 CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, sodium salt, cis- (9CI)
 (CA INDEX NAME)

Relative stereochemistry.

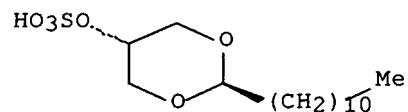


● Na

RN 186189-06-0 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, sodium salt, trans- (9CI)
(CA INDEX NAME)

Relative stereochemistry.

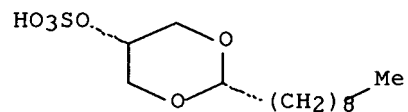


● Na

RN 259738-90-4 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, potassium salt, cis- (9CI)
(CA INDEX NAME)

Relative stereochemistry.

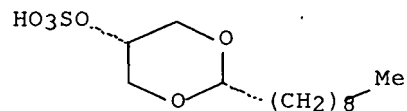


● K

RN 259738-91-5 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, ammonium salt, cis- (9CI)
(CA INDEX NAME)

Relative stereochemistry.

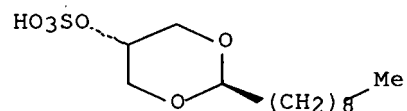


● NH₃

RN 259738-92-6 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, potassium salt, trans- (9CI)
(CA INDEX NAME)

Relative stereochemistry.

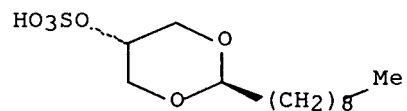


● K

RN 259738-93-7 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, ammonium salt, trans- (9CI)
(CA INDEX NAME)

Relative stereochemistry.

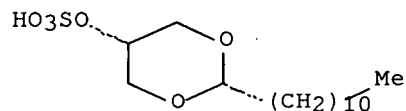


● NH₃

RN 259738-94-8 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, potassium salt, cis- (9CI)
(CA INDEX NAME)

Relative stereochemistry.

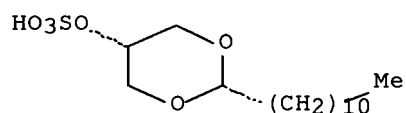


● K

RN 259738-95-9 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, ammonium salt, cis- (9CI)
(CA INDEX NAME)

Relative stereochemistry.

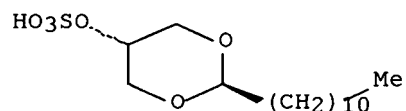


● NH3

RN 259738-96-0 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, potassium salt, trans- (9CI)
(CA INDEX NAME)

Relative stereochemistry.

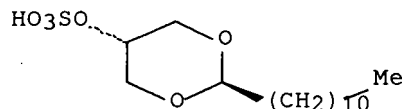


● K

RN 259738-97-1 CAPLUS

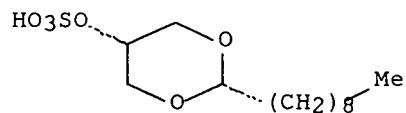
CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, ammonium salt, trans- (9CI)
(CA INDEX NAME)

Relative stereochemistry.



L22 ANSWER 17 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2000:51525 CAPLUS Full-text
 DOCUMENT NUMBER: 132:196127
 TITLE: Synthesis and surface properties of chemodegradable
 anionic surfactants: diastereomeric
 (2-n-alkyl-1,3-dioxan-5-yl) sulfates with monovalent
 counter-ions
 AUTHOR(S): Piasecki, Andrzej; Mayhew, Alexandra
 CORPORATE SOURCE: Institute of Organic and Polymer Technology, Wroclaw
 University of Technology, Wroclaw, 50-370, Pol.
 SOURCE: Journal of Surfactants and Detergents (2000
), 3(1), 59-65
 CODEN: JSDEFL; ISSN: 1097-3958
 PUBLISHER: AOCs Press
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 ED Entered STN: 23 Jan 2000
 AB Sodium, potassium and ammonium cis- and trans-(2-n-alkyl-1,3-dioxan-5-yl)
 sulfates 6-8 (alkyl: n-C9H19, 6a-8a, and n-C11H23, 6b-8b) were synthesized in
 a reaction of aliphatic aldehydes 1a,b with glycerol 2 followed by separation
 in high yields of individual geometric isomers of cis- and trans-2-n-alkyl-5-
 hydroxy-1,3-dioxanes, cis-3a,b and trans-3a,b, followed by sulfation with
 sulfur trioxide-pyridine complex, and finally neutralization with NaOH, KOH,
 and NH4OH, resp. Phys. data of the compds. and some surface properties of 2-
 n-nonyl derivs., such as critical micelle concentration (CMC), effectiveness
 of aqueous surface tension reduction (Π CMC), surface excess concentration
 (Γ CMC), and the surface area demand per mol. (ACMC), were determined It was
 shown that the surface activity of these compds. is influenced both by their
 geometric structure and by the monovalent counter-ion.
 IT 186189-03-7P 186189-04-8P 186189-05-9P
 186189-06-0P 259738-90-4P 259738-91-5P
 259738-92-6P 259738-93-7P 259738-94-8P
 259738-95-9P 259738-96-0P 259738-97-1P
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or
 engineered material use); PREP (Preparation); USES (Uses)
 (synthesis and surface properties of chemodegradable diastereomeric
 (alkyldioxanyl) sulfate anionic surfactants with monovalent
 counter-ions)
 RN 186189-03-7 CAPLUS
 CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA
 INDEX NAME)

Relative stereochemistry.

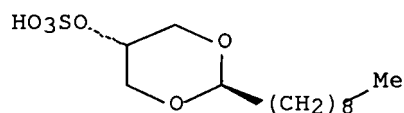


● Na

RN 186189-04-8 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, sodium salt, trans- (9CI)
(CA INDEX NAME)

Relative stereochemistry.

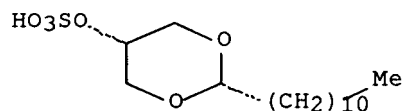


● Na

RN 186189-05-9 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, sodium salt, cis- (9CI)
(CA INDEX NAME)

Relative stereochemistry.

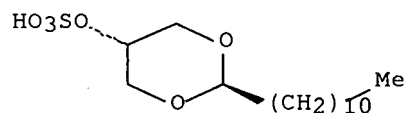


● Na

RN 186189-06-0 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, sodium salt, trans- (9CI)
(CA INDEX NAME)

Relative stereochemistry.

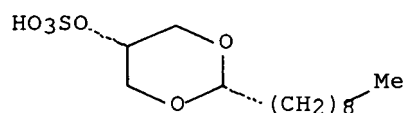


● Na

RN 259738-90-4 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, potassium salt, cis- (9CI)
(CA INDEX NAME)

Relative stereochemistry.

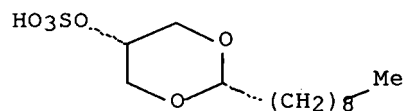


● K

RN 259738-91-5 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, ammonium salt, cis- (9CI)
(CA INDEX NAME)

Relative stereochemistry.

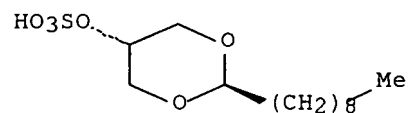


● NH3

RN 259738-92-6 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, potassium salt, trans- (9CI)
(CA INDEX NAME)

Relative stereochemistry.

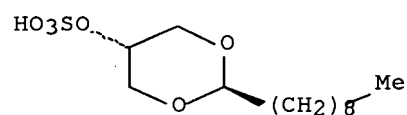


● K

RN 259738-93-7 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, ammonium salt, trans- (9CI)
(CA INDEX NAME)

Relative stereochemistry.

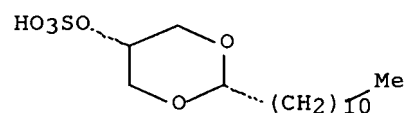


● NH3

RN 259738-94-8 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, potassium salt, cis- (9CI)
(CA INDEX NAME)

Relative stereochemistry.

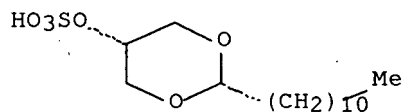


● K

RN 259738-95-9 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, ammonium salt, cis- (9CI)
(CA INDEX NAME)

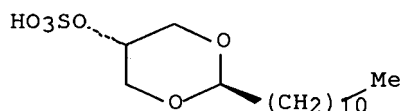
Relative stereochemistry.



● NH₃

RN 259738-96-0 CAPLUS
CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, potassium salt, trans-
(9CI) (CA INDEX NAME)

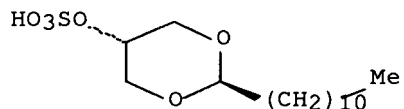
Relative stereochemistry.



● K

RN 259738-97-1 CAPLUS
CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, ammonium salt, trans- (9CI)
(CA INDEX NAME)

Relative stereochemistry.



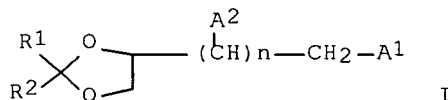
● NH₃

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 18 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:774192 CAPLUS Full-text
DOCUMENT NUMBER: 132:13333
TITLE: Dioxolanes as (intermediates for) surfactants, their
preparation, and acid decomposition
INVENTOR(S): Nakamura, Masaki; Nomura, Hiroshi; Miyamoto, Masanori;
Hasegawa, Akira
PATENT ASSIGNEE(S): Osaka City, Japan; Teshima Kaken K. K.
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11335371	A	19991207	JP 1998-138241	19980520 <--
JP 3049390	B2	20000605		
PRIORITY APPLN. INFO.:			JP 1998-138241	19980520 <--
ED Entered STN: 08 Dec 1999				
GI				



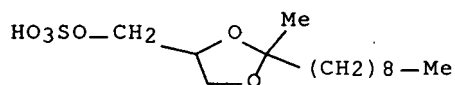
AB Dioxolanes I [R1 = Ra(ORb)y; Ra = C6-22 alkyl, alkenyl, alkynyl, (substituted) aryl; Rb = C2-4 alkylene; y = 0-20; R2 = Me, Et; n = 0, 1; A1, A2 = OH, OSO3M; M = H, alkali metal, alkaline earth metal, ammonium, C2-3 alkanolammonium, C1-5 alkylammonium, basic amino acid residue], which are decomposed into ketones, glycerin, erythritol, etc. by treatment with acids, are prepared by sulfation of I (n = 0, 1; A1 = A2 = OH). Thus, 2-undecanone was condensed with glycerin and sulfated to give I (R1 = nonyl, R2 = Me, n = 0, A1 = OSO3Na) (II) showing critical micelle concentration 1.0×10^{-2} mol/L, surface tension (at the critical micelle concentration) 39.6 mN/m, and Krafft point (1%) $< 0^\circ$. II was completely decomposed by 1.0 N HCl at 25° for 1 h.

IT 251453-51-7P 251453-53-9P

RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
 (preparation and acid decomposition of dioxolanes as (intermediates for) surfactants)

RN 251453-51-7 CAPLUS

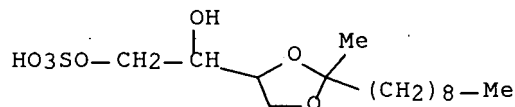
CN 1,3-Dioxolane-4-methanol, 2-methyl-2-nonyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 251453-53-9 CAPLUS

CN 1,2-Ethanediol, 1-(2-methyl-2-nonyl-1,3-dioxolan-4-yl)-, 2-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)



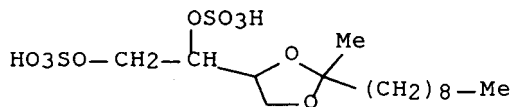
● Na

IT 251453-54-0P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation and acid decomposition of dioxolanes as (intermediates for) surfactants)

RN 251453-54-0 CAPLUS

CN 1,2-Ethanediol, 1-(2-methyl-2-nonyl-1,3-dioxolan-4-yl)-, bis(hydrogen sulfate), disodium salt (9CI) (CA INDEX NAME)



●2 Na

L22 ANSWER 19 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:619226 CAPLUS Full-text

DOCUMENT NUMBER: 132:238708

TITLE: Synthesis and properties of sulfate- and polyoxyethylene-type chemodegradable surfactants bearing a 1,3-dioxolane ring

AUTHOR(S): Yamamura, Shingo; Ono, Daisuke; Nakamura, Masaki; Shizuma, Motohiro; Tamai, Toshiyuki; Takeda, Tokuji

CORPORATE SOURCE: Osaka Munic. Tech. Res. Inst., Osaka, 536-8553, Japan

SOURCE: Kagaku to Kogyo (Osaka) (1999), 73(9), 419-425

CODEN: KKGOAG; ISSN: 0368-5918

PUBLISHER: Osaka Koken Kyokai

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

ED Entered STN: 28 Sep 1999

AB Chemodegradable anionic and nonionic surfactants bearing a 1,3-dioxolane ring were prepared by the acid-catalyzed condensation of ketones and glycerol, followed by sulfation or ethoxylation. These surfactants had good surface activity and detergency, and were easily hydrolyzed under acidic conditions.

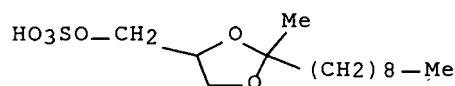
IT 251453-51-7P, (2-Methyl-2-nonyl-1,3-dioxolan-4-yl)methyl sulfate sodium salt 261963-60-4P, (2-Methyl-2-undecyl-1,3-dioxolan-4-yl)methyl sulfate sodium salt

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(anionic surfactant; preparation of chemodegradable surfactants bearing

dioxolane ring)

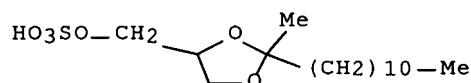
RN 251453-51-7 CAPLUS

CN 1,3-Dioxolane-4-methanol, 2-methyl-2-nonyl-, hydrogen sulfate, sodium salt
(9CI) (CA INDEX NAME)

● Na

RN 261963-60-4 CAPLUS

CN 1,3-Dioxolane-4-methanol, 2-methyl-2-undecyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



● Na

L22 ANSWER 20 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:371434 CAPLUS Full-text

DOCUMENT NUMBER: 131:134992

TITLE: Adsorption of Diastereomerically Pure Sodium cis- and trans-(2-n-Alkyl-1,3-dioxan-5-yl) Sulfates at the n-Heptane-Water Interface

AUTHOR(S): Sokolowski, Adam; Zielonka, Barbara; Piasecki, Andrzej; Wilk, Kazimiera A.; Burczyk, Bogdan

CORPORATE SOURCE: Institute of Organic and Polymer Technology, Wroclaw University of Technology, Wroclaw, 50-370, Pol.

SOURCE: Journal of Physical Chemistry B (1999), 103(26), 5512-5516

CODEN: JPCBFK; ISSN: 1089-5647

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 16 Jun 1999

AB A systematic study concerning adsorption and aggregation of chemodegradable, diastereomerically pure Na cis- and trans-(2-n-alkyl-1,3- dioxan-5-yl) sulfates (alkyl: n-C9H19 and n-C11H23) in the system consisting of n-heptane in contact with aqueous 0.2M NaCl at 31° was undertaken. The role of the 6-membered 1,3-dioxane ring was discussed in terms of comparison between studied surfactants and classical Na decyl and dodecyl sulfates. Surface parameters of compds. under study at the oil-H2O interface, i.e., surface tension reduction (π), surface excess concentration (Γ), surface area demand per mol. (A), critical micelle concentration (cmc), standard free energy of adsorption (ΔG_{oads}), and of micellization (ΔG_{ocmc}), show differences due to the

adsorption and interfacial tensions of diastereomerically pure sodium cis- and trans-(alkyl dioxan-yl) sulfates at heptane-aqueous NaCl systems and to the hydrophilic, i.e., sulfate group configuration at the C-5 atom of the 1,3-dioxane ring. The cmc, ΔG_{oads} , and ΔG_{ocmc} values are lower for the trans isomers than for the cis ones, whereas the effectiveness of surface tension reduction is nearly the same for both isomers. Addnl., the interfacial tensions of the studied acetal-type isomers were described for the heptane-aqueous NaCl systems containing Aerosol OT. According to findings the configuration of the $-\text{OSO}_3\text{Na}$ polar group at the C-5 C atom of the 1,3-dioxane ring, i.e., equatorial in trans isomers and axial in cis isomers, involves diastereomeric differentiation in the aggregation abilities.

IT 186189-03-7 186189-04-8 186189-05-9
186189-06-0

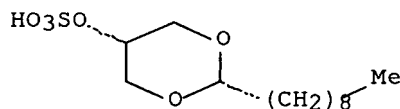
RL: PEP (Physical, engineering or chemical process); PRP (Properties);
PROC (Process)

(adsorption and interfacial tensions of diastereomerically pure sodium
cis- and trans-(alkyldioxan-yl) sulfates at heptane-water interface)

RN 186189-03-7 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA
INDEX NAME)

Relative stereochemistry.

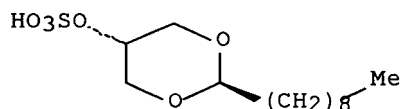


● Na

RN 186189-04-8 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, sodium salt, trans- (9CI)
(CA INDEX NAME)

Relative stereochemistry.

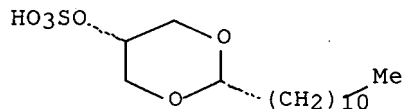


● Na

RN 186189-05-9 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, sodium salt, cis- (9CI)
(CA INDEX NAME)

Relative stereochemistry.

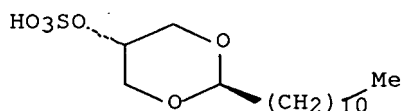


● Na

RN 186189-06-0 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, sodium salt, trans- (9CI)
(CA INDEX NAME)

Relative stereochemistry.



● Na

REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 21 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:321047 CAPLUS Full-text

DOCUMENT NUMBER: 131:5434

TITLE: Synthesis of disaccharides, containing sulfur in the
ring of the reducing monosaccharide unit, through a
nonglycosylating chemical strategyAUTHOR(S): Isac-Garcia, Joaquin; Calvo-Flores, Francisco G.;
Hernandez-Mateo, Fernando; Santoyo-Gonzalez, FranciscoCORPORATE SOURCE: Instituto de Biotecnologia, Facultad de Ciencias
Universidad de Granada, Granada, E-18071, SpainSOURCE: Chemistry--A European Journal (1999), 5(5),
1512-1525

CODEN: CEUJED; ISSN: 0947-6539

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 26 May 1999

AB The synthesis of disaccharides containing sulfur in the reducing ring through a nonglycosylating chemical strategy is described. Lactose, maltose and cellobiose were transformed in several steps into the appropriately protected 4-O-glycosyl-2,3-O-isopropyliden-aldehydo-D-glucose di-Me acetals and 4-O-glycosyl-2,3-O-isopropyliden-aldehydo-L-idose di-Me acetals. The protected 4-O-glycosyl-2,3-O-isopropyliden-aldehydo-D-glucose di-Me acetals were converted into the corresponding 4-O-glycosyl-5,6-dideoxy-5,6-epithio-2,3-O-isopropylidene-aldehydo-L-idose di-Me acetals via the 5,6-cyclic sulfates, by reaction with potassium thioacetate or potassium thiocyanate and treatment with NaOMe/MeOH. Nucleophilic ring opening of the episulfide ring, with sodium acetate followed by acidic hydrolysis, Zemplen de-O-acetylation and

acetylation gave the thio disaccharides 4-O-(2',3',4',6'-tetra-O-acetyl- β -D-galactopyranosyl-, - α -D-glucopyranosyl- and - β -D-glucopyranosyl)-1,2,3,6-tetra-O-acetyl-5-thio- α,β -L-idopyranoses. 1,2,3-Tri-O-acetyl-4-O-[2',3',4',6'-tetra-O-acetyl- β -D-galactopyranosyl]-6-deoxy-5-thio- α,β -L-idopyranose was obtained by treatment of 4-O-(2',6'-di-O-acetyl-3',4'-O-isopropylidene- β -D-galactopyranosyl)-2,3-O-isopropylidene-6-S-cyano-5-O-sulfonate-6-thio-aldehyde-D-glucose di-Me acetal potassium salt with lithium aluminum hydride followed by acidic hydrolysis and acetylation. The analogous thio maltose and cellobiose were synthesized following a similar strategy (5,6-cyclic sulfate \rightarrow episulfide \rightarrow thiosugar).

IT 225519-35-7P 225519-36-8P 225519-37-9P

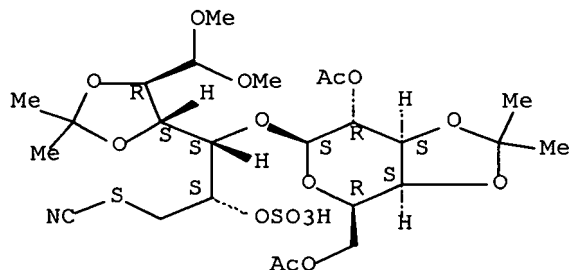
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of disaccharides containing sulfur in the ring of the reducing monosaccharide unit, through a nonglycosylating chemical strategy)

RN 225519-35-7 CAPLUS

CN D-Glucose, 4-O-[2,6-di-O-acetyl-3,4-O-(1-methylethylidene)- β -D-galactopyranosyl]-2,3-O-(1-methylethylidene)-6-thio-, 1-(dimethyl acetal), 6-cyanate 5-(hydrogen sulfate), potassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

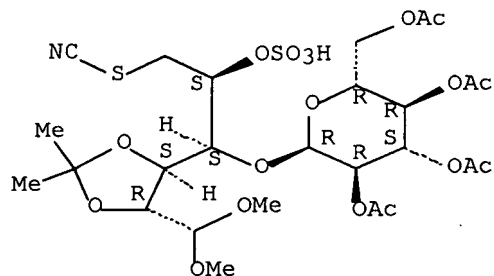


● K

RN 225519-36-8 CAPLUS

CN D-Glucose, 2,3-O-(1-methylethylidene)-4-O-(2,3,4,6-tetra-O-acetyl- α -D-glucopyranosyl)-6-thio-, 1-(dimethyl acetal), 6-cyanate 5-(hydrogen sulfate), potassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

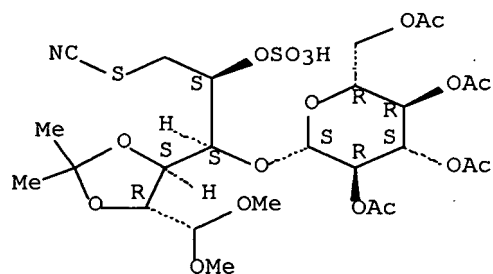


● K

RN 225519-37-9 CAPLUS

CN D-Glucose, 2,3-O-(1-methylethylidene)-4-O-(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)-6-thio-, 1-(dimethyl acetal), 6-cyanate 5-(hydrogen sulfate), potassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



● K

REFERENCE COUNT: 72 THERE ARE 72 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 22 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:304333 CAPLUS Full-text

DOCUMENT NUMBER: 130:311801

TITLE: Preparation of novel sodium sulfates of 1,3-dioxane derivatives

INVENTOR(S): Piasecki, Andrzej; Burczyk, Bogdan; Sokolowski, Adam; Kotlewska, Urszula

PATENT ASSIGNEE(S): Politechnika Wroclawska, Pol.

SOURCE: Pol., 4 pp.
CODEN: POXXA7

DOCUMENT TYPE: **Patent**

LANGUAGE: Polish

FAMILY ACC. NUM. COUNT: 1

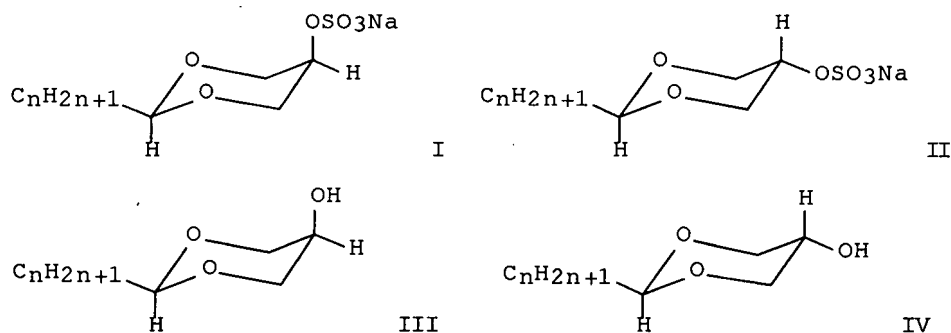
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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      PL 175563          B1      19990129      PL 1994-306516          19941223 <--
PRIORITY APPLN. INFO.:          PL 1994-306516          19941223 <--
OTHER SOURCE(S):          MARPAT 130:311801
ED      Entered STN:   19 May 1999
GI

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AB The title compds. [I or II; n = 7-13], potentially useful as surfactants (no data), were prepared by reacting cis-(or trans-)2-alkyl-5-hydroxy-1,3-dioxanes [III or IV] with ClSO₃H in CCl₄ in the presence of pyridine followed by treatment of the intermediate with alc.-H₂O solution of NaOH, Na₂CO₃ or NaHCO₃ or by reacting III or IV with C₅H₅N*SO₃ in CCl₄ followed by treatment of the intermediate with alc.-aqueous solution of NaOH, Na₂CO₃ or NaHCO₃.

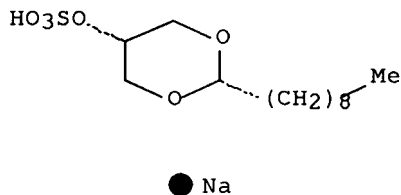
IT 186189-03-7P 186189-06-0P 223537-63-1P

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(preparation of novel sodium sulfates of 1,3-dioxane derivs.)

RN 186189-03-7 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA
INDEX NAME)

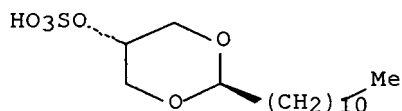
Relative stereochemistry.



RN 186189-06-0 CAPLUS

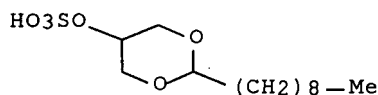
CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, sodium salt, trans- (9CI)
(CA INDEX NAME)

Relative stereochemistry.



● Na

RN 223537-63-1 CAPLUS
 CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)

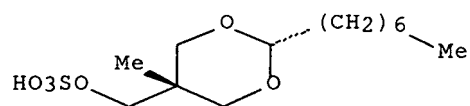


● Na

L22 ANSWER 23 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1997:808663 CAPLUS Full-text
 DOCUMENT NUMBER: 128:63186
 TITLE: Chemical structure and surface activity. XXXII.
 Synthesis and surface properties of chemodegradable
 surfactants: sodium cis-[(2-n-alkyl-5-methyl-1,3-
 dioxan-5-yl)methyl] sulfates
 AUTHOR(S): Piasecki, Andrzej; Burczyk, Bogdan; Sokolowski, Adam;
 Mayhew, Aleksandra; Wilk, Kazimiera A.
 CORPORATE SOURCE: INSTITUTE OF ORGANIC AND POLYMER TECHNOLOGY, TECHNICAL
 UNIVERSITY OF WROCLAW, WROCLAW, 50-370, Pol.
 SOURCE: Bulletin of the Polish Academy of Sciences, Chemistry
 (1997), 45(3), 329-337
 CODEN: BPACEQ; ISSN: 0239-7285
 PUBLISHER: Polish Academy of Sciences
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 ED Entered STN: 31 Dec 1997
 AB Sodium cis-[(2-n-alkyl-5-methyl-1,3-dioxan-5-yl)methyl] sulfates (alkyl: n-
 C7H15, n-C9H19 and n-C11H23) were synthesized by reaction of aliphatic
 aldehydes and 1,1,1-tris(hydroxymethyl)ethane, followed by sulfation with
 sulfur trioxide-pyridine complex and neutralization with NaHCO3 (NaOH) of the
 intermediate mixts. of cis- and trans-2-n-alkyl-5-hydroxymethyl-5- methyl-1,3-
 dioxanes or individual cis-isomers. Some of their surface properties at the
 aqueous solution-air interface were determined
 IT 139888-69-0P 139888-70-3P 139888-72-5P
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (synthesis and surface properties of chemodegradable sodium
 cis-[(2-n-alkyl-5-methyl-1,3-dioxan-5-yl)methyl] sulfate surfactants)
 RN 139888-69-0 CAPLUS
 CN 1,3-Dioxane-5-methanol, 2-heptyl-5-methyl-, hydrogen sulfate, sodium salt,

cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.

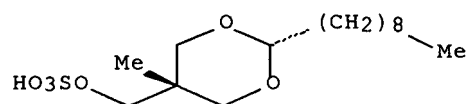


● Na

RN 139888-70-3 CAPLUS

CN 1,3-Dioxane-5-methanol, 5-methyl-2-nonyl-, hydrogen sulfate, sodium salt,
cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.

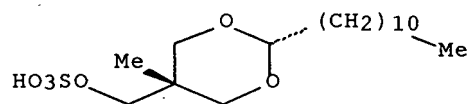


● Na

RN 139888-72-5 CAPLUS

CN 1,3-Dioxane-5-methanol, 5-methyl-2-undecyl-, hydrogen sulfate, sodium
salt, cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.



● Na

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 24 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:569475 CAPLUS Full-text

DOCUMENT NUMBER: 127:308641

TITLE: Synthesis, surface properties, and hydrolysis of
chemodegradable anionic surfactants:
diastereomerically pure cis- and trans-2,5-
disubstituted-1,3-dioxanes

AUTHOR(S): Piasecki, Andrzej; Sokolowski, Adam; Burczyk, Bogdan;
Gancarz, Roman; Kotlewska, Urszula

CORPORATE SOURCE: Institute Organic Polymer Technology, Technical

SOURCE: University Wroclaw, Wroclaw, 50-370, Pol.
Journal of Colloid and Interface Science (1997)
, 192(1), 74-82
CODEN: JCISA5; ISSN: 0021-9797

PUBLISHER: Academic
DOCUMENT TYPE: Journal
LANGUAGE: English

ED Entered STN: 06 Sep 1997

AB Two new groups of anionic surfactants, sodium cis- and trans-(2-n-undecyl-1,3-dioxan-5-yl)methyl sulfates and sodium cis- and trans-3-[(2-n-undecyl-1,3-dioxan-5-yl)oxy]propanesulfonates, were synthesized and investigated. Surface properties of these surfactants, i.e., surface excess concentration, Γ , surface area demand per mol., A , effectiveness of surface tension reduction, Π , critical micelle concentration, CMC, and standard free energies of adsorption, ΔG_{ads0} , and of micellization, ΔG_{mic0} , were determined. The trans-isomers, in which the configuration of the polar group is equatorial, are more surface active than the cis-isomers with axial configuration of the polar group at the C-5 carbon atom of the 1,3-dioxane ring. The surfactants under study undergo easy hydrolysis reaction in DCl/D₂O solution with cleavage of the 1,3-dioxane ring to nonsurface active intermediates. The trans-isomers are hydrolyzed faster than the cis-isomers.

IT 197294-67-0P 197294-68-1P 197294-69-2P
197294-70-5P

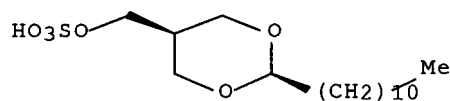
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(synthesis, surface properties, and hydrolysis of diastereomerically pure cis- and trans-2,5-disubstituted-1,3-dioxane anionic surfactants)

RN 197294-67-0 CAPLUS

CN 1,3-Dioxane-5-methanol, 2-undecyl-, hydrogen sulfate, sodium salt, cis-
(9CI) (CA INDEX NAME)

Relative stereochemistry.

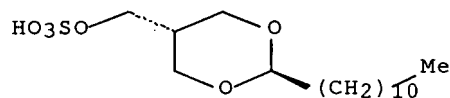


● Na

RN 197294-68-1 CAPLUS

CN 1,3-Dioxane-5-methanol, 2-undecyl-, hydrogen sulfate, sodium salt, trans-
(9CI) (CA INDEX NAME)

Relative stereochemistry.

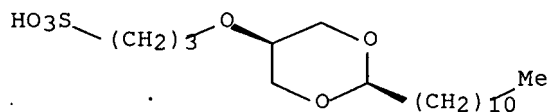


● Na

RN 197294-69-2 CAPLUS

CN 1-Propanesulfonic acid, 3-[(2-undecyl-1,3-dioxan-5-yl)oxy]-, sodium salt,
cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.

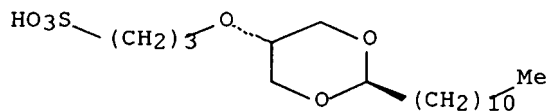


● Na

RN 197294-70-5 CAPLUS

CN 1-Propanesulfonic acid, 3-[(2-undecyl-1,3-dioxan-5-yl)oxy]-, sodium salt,
trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.



● Na

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 25 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:335206 CAPLUS Full-text

DOCUMENT NUMBER: 127:34416

TITLE: Applications of Cyclic Sulfates of vic-Diols:
Synthesis of Episulfides, Olefins, and Thio Sugars
AUTHOR(S): Calvo-Flores, Francisco G.; Garcia-Mendoza, Pilar;
Hernandez-Mateo, Fernando; Isac-Garcia, Joaquin;
Santoyo-Gonzalez, Francisco

CORPORATE SOURCE: Instituto de Biotecnologia Facultad de Ciencias,
Universidad de Granada, Granada, 18071, Spain

SOURCE: Journal of Organic Chemistry (1997), 62(12),
3944-3961

CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 127:34416

ED Entered STN: 29 May 1997

AB A new efficient and expeditious one-pot synthesis of thiiranes and olefins
from cyclic sulfates of vic-diols is described. Opening of cyclic sulfates
with potassium thioacetate or potassium thiocyanate followed by treatment with
sodium methoxide led to episulfides. Olefins were obtained when potassium

selenocyanate was used as nucleophile, and the obtained monoesters were treated with sodium borohydride. This method was applied to acyclic polyols derived from chiral glycerin, 1,2- isopropylidenehexofuranoses with different substituents at C-3, and di-Me acetals derived from pentoses and hexoses. The methodol. is highly versatile, and its applicability has been demonstrated by the preparation of different 4- and 5-thio sugars by opening of the thiirane ring with sodium acetate or lithium aluminum hydride. Reduction with lithium aluminum hydride of the thiocyanate sulfate potassium salt obtained by the opening of cyclic sulfate with KSCN allowed the direct preparation of 5-deoxy-4-thio and 6-deoxy-5-thio sugars. Cyclic thio sugars with the sulfur atom in the ring are obtained by acidic hydrolysis of the 5-thiol derivs. of 1,2-O-isopropylidenehexofuranoses and 4-thiopentose di-Me acetals. Using this method, an efficient synthesis of 5-thio-L-fucose as well as the synthesis of 2,5-dideoxy-4-thiofuranose is described.

IT 190599-02-1P 190599-04-3P 190599-21-4P
190599-74-7P

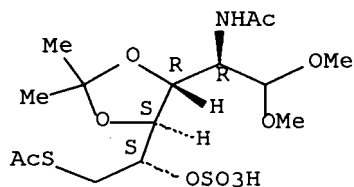
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(synthesis of episulfides and olefins and thio-sugars from cyclic sulfates of vic-diols)

RN 190599-02-1 CAPLUS

CN D-Glucose, 2-(acetylamino)-2-deoxy-3,4-O-(1-methylethylidene)-6-thio-, 1-(dimethyl acetal), 6-acetate 5-(hydrogen sulfate), monopotassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

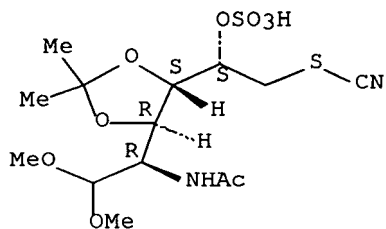


● K

RN 190599-04-3 CAPLUS

CN D-Glucose, 2-(acetylamino)-2-deoxy-3,4-O-(1-methylethylidene)-6-thio-, 1-(dimethyl acetal), 6-cyanate 5-(hydrogen sulfate), monopotassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

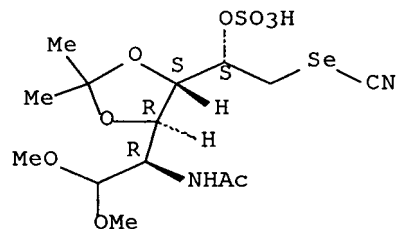


● K

RN 190599-21-4 CAPLUS

CN D-Glucose, 2-(acetylamino)-2-deoxy-3,4-O-(1-methylethylidene)-6-seleno-, 1-(dimethyl acetal), 6-cyanate 5-(hydrogen sulfate), monopotassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

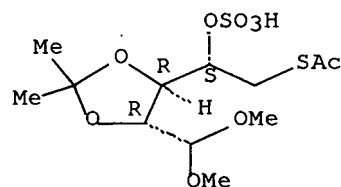


● K

RN 190599-74-7 CAPLUS

CN D-Xylose, 2,3-O-(1-methylethylidene)-5-thio-, dimethyl acetal, 6-acetate 5-(hydrogen sulfate), potassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



● K

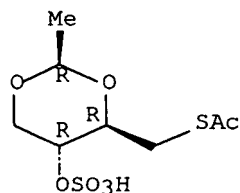
IT 190599-15-6P

RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of episulfides and olefins and thio-sugars from cyclic sulfates of vic-diols)

RN 190599-15-6 CAPLUS

CN Ethanethioic acid, S-[[2-methyl-5-(sulfooxy)-1,3-dioxan-4-yl]methyl] ester, potassium salt, [2R-(2 α ,4 α ,5 β)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



● K

REFERENCE COUNT: 136 THERE ARE 136 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 26 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:164886 CAPLUS Full-text

DOCUMENT NUMBER: 126:145606

TITLE: Synthesis, Surface Properties, and Hydrolysis of Chemodegradable Anionic Surfactants: Diastereomerically Pure Sodium cis- and trans-2-n-Alkyl-1,3-dioxan-5-yl Sulfates

AUTHOR(S): Piasecki, Andrzej; Sokołowski, Adam; Burczyk, Bogdan; Gancarz, Roman; Kotlewska, Urszula

CORPORATE SOURCE: Institute of Organic and Polymer Technology and Institute of Organic Chemistry Biochemistry and Biotechnology, Technical University of Wrocław, Wrocław, 50-370, Pol.

SOURCE: Langmuir (1997), 13(6), 1434-1439
CODEN: LANGD5; ISSN: 0743-7463

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 11 Mar 1997

AB A systematic study concerning the synthesis, adsorption, micellization, and hydrolytic decomposition of new, chemodegradable and diastereomerically pure sodium cis- and trans-2-n-alkyl-1,3-dioxan-5-yl sulfates (alkyl: n-C₇H₁₅, n-C₉H₁₉, and n-C₁₁H₂₃) has been undertaken. Surface parameters of the compds. under study at the aqueous solution/air interface, i.e., surface tension reduction, surface excess concentration, surface area demand per mol., and standard free energy of adsorption and micellization, show differences both in the alkyl chain length and in the hydrophilic, i.e., sulfate, group configuration at the 1,3-dioxane ring. The cmc values are lower for the trans-isomers than for the cis-isomers, the $\Delta G^{\circ}_{\text{ads}}$ and $\Delta G^{\circ}_{\text{cmc}}$ values are lower for trans-isomers, and the effectiveness of surface tension reduction is higher for the cis-isomers than for the trans-isomers. The investigated compds. undergo an easy hydrolysis reaction of the acetal function, leading to starting aldehydes and sulfated glycerol. The trans-isomers are hydrolyzed much faster than cis-isomers, and no isomerization reaction of the type cis \rightarrow trans is observed during the hydrolysis process.

IT 186189-01-5P 186189-02-6P 186189-03-7P

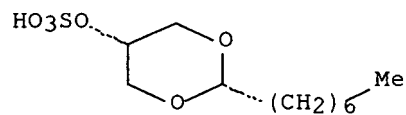
186189-04-8P 186189-05-9P 186189-06-0P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (synthesis, surface properties, and hydrolysis of chemodegradable sodium cis- and trans-2-n-alkyl-1,3-dioxan-5-yl sulfate anionic surfactants)

RN 186189-01-5 CAPLUS

CN 1,3-Dioxan-5-ol, 2-heptyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.

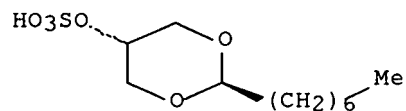


● Na

RN 186189-02-6 CAPLUS

CN 1,3-Dioxan-5-ol, 2-heptyl-, hydrogen sulfate, sodium salt, trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.

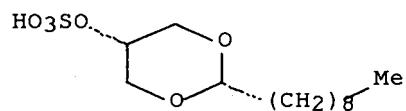


● Na

RN 186189-03-7 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, sodium salt, cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.

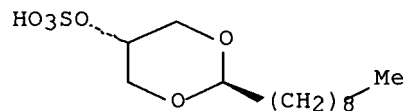


● Na

RN 186189-04-8 CAPLUS

CN 1,3-Dioxan-5-ol, 2-nonyl-, hydrogen sulfate, sodium salt, trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.

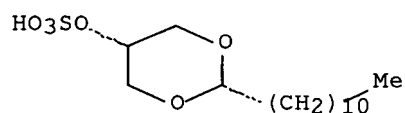


● Na

RN 186189-05-9 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, sodium salt, cis- (9CI)
(CA INDEX NAME)

Relative stereochemistry.

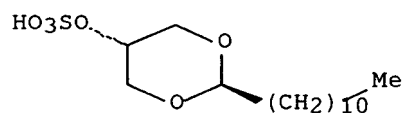


● Na

RN 186189-06-0 CAPLUS

CN 1,3-Dioxan-5-ol, 2-undecyl-, hydrogen sulfate, sodium salt, trans- (9CI)
(CA INDEX NAME)

Relative stereochemistry.



● Na

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 27 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:91830 CAPLUS Full-text

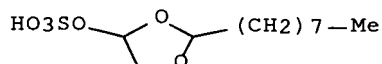
DOCUMENT NUMBER: 126:119361

TITLE: Chemical structure and activity. XXX. Synthesis and surface properties of chemodegradable anionic surfactants: sodium (2-n-alkyl-1,3-dioxan-5-yl)sulfates

AUTHOR(S): Piasecki, Andrzej; Sokolowski, Adam; Burczyk, Bogdan; Kotlewska, Urszula

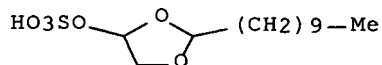
CORPORATE SOURCE: Inst. Organic Polymer Technology, Technical Univ.

Wroclaw, Wroclaw, 50-370, Pol.
 SOURCE: Journal of the American Oil Chemists' Society (1997), 74(1), 33-37
 CODEN: JAOCA7; ISSN: 0003-021X
 PUBLISHER: AOCS Press
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 ED Entered STN: 08 Feb 1997
 AB In the reaction of cis- and trans-2-n-alkyl-5-hydroxy-1,3-dioxane mixts. with SO₃·pyridine complex, followed by neutralization with NaOH or Na₂CO₃, a new group of anionic surfactants, i.e., Na cis- and trans-(2-n-alkyl-1,3-dioxan-5-yl)sulfates were obtained. The hydrophobic intermediates used in the sulfation reaction were obtained in high yields from 4-component glycerol acetals by the process of transacetalization and selective crystallization of 1,3-dioxane derivs. The phys. data of the new compds. and some of their surface properties, such as critical micelle concentration, effectiveness of water surface tension reduction, standard free energies of adsorption and micellization, surface excess concentration, and the surface area demand per mol. were determined. The surface activity of the standard anionic surfactant Na dodecyl sulfate should be similar to the surface activity of Na (2-n-decyl-1,3-dioxan-5-yl)sulfate.
 IT **186302-97-6P**, 2-Octyl-1,3-dioxolan-5-yl sulfate sodium salt
186302-98-7P, 2-Decyl-1,3-dioxolan-5-yl sulfate sodium salt
186302-99-8P, 2-Dodecyl-1,3-dioxolan-5-yl sulfatesodium salt
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (synthesis and surface properties of chemodegradable anionic surfactants sodium (alkyldioxanyl)sulfates)
 RN 186302-97-6 CAPLUS
 CN 1,3-Dioxolan-4-ol, 2-octyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



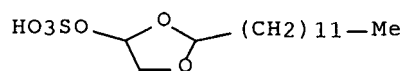
● Na

RN 186302-98-7 CAPLUS
 CN 1,3-Dioxolan-4-ol, 2-decyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



● Na

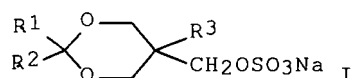
RN 186302-99-8 CAPLUS
 CN 1,3-Dioxolan-4-ol, 2-dodecyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



● Na

L22 ANSWER 28 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1995:673889 CAPLUS Full-text
 DOCUMENT NUMBER: 123:59616
 TITLE: Manufacturing surface-active sodium sulfate
 derivatives of 2,5-di- and 2,2,5-trisubstituted
 5-hydroxymethyl-1,3-dioxanes
 INVENTOR(S): Piasecki, Andrzej; Burczyk, Bogdan
 PATENT ASSIGNEE(S): Politechnika Wroclawska, Pol.
 SOURCE: Pol., 5 pp.
 CODEN: POXXA7
 DOCUMENT TYPE: **Patent**
 LANGUAGE: Polish
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

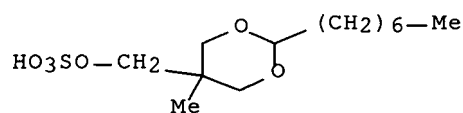
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PL 162441	B1	19931231	PL 1990-283199	19900103 <--
PRIORITY APPLN. INFO.: MARPAT 123:59616			PL 1990-283199	19900103 <--
OTHER SOURCE(S):				
ED Entered STN: 14 Jul 1995				
GI				



AB Title surfactants I (R1 = CaH2a+1, Ph, or CbH2b+1C6H4, a = 5-15, b = 1-12, R2 = H or CcH2c+1, c = 1-8, R1R2 = CdH2d, d = 5-12, R3 = Me or Et) are manufactured by reaction of the corresponding hydroxymethyldioxane with C5H5N and ClSO3H in a solvent such as CCl4 at 260-320K and dioxane derivative-ClSO3H-C5H5N mol ratio 1:(1-1.1):(2.1-2.5) or with a C5H5N-SO3 complex (II) in a solvent such as CCl4 at dioxane derivative-II mol ratio 1:(1-1.1) and 260-320K, evaporation of the reaction mixture, dissoln. of the evaporated product in an aqueous alc. solution of NaOH, NaHCO3, or Na2CO3, and evaporation of the solvent.

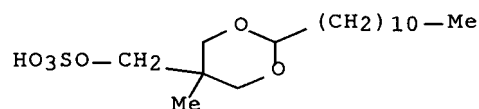
IT **143482-00-2P 143482-02-4P**
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (manufacturing surface-active sodium sulfate derivs. of 2,5-di- and 2,2,5-trisubstituted 5-hydroxymethyl-1,3-dioxanes)

RN 143482-00-2 CAPLUS
 CN 1,3-Dioxane-5-methanol, 2-heptyl-5-methyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 143482-02-4 CAPLUS

CN 1,3-Dioxane-5-methanol, 5-methyl-2-undecyl-, hydrogen sulfate, sodium salt
(9CI) (CA INDEX NAME)

● Na

L22 ANSWER 29 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1994:194530 CAPLUS Full-text

DOCUMENT NUMBER: 120:194530

TITLE: Studies on synthesis and properties of surfactants
with specific functions

AUTHOR(S): Yamamura, Shingo

CORPORATE SOURCE: Osaka Munic. Tech. Res. Inst., Osaka, 536, Japan

SOURCE: Yukagaku (1994), 43(1), 2-9

CODEN: YK GKAM; ISSN: 0513-398X

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

ED Entered STN: 16 Apr 1994

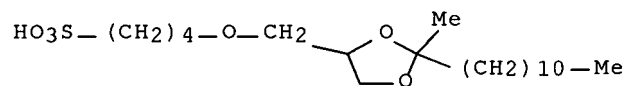
AB Novel surfactants with specific functions were synthesized from inexpensive, com. available bulk chems. by convenient synthetic methods. All were characterized by features such as chemical degradability, catalytic activity for a halide displacement reaction (Finkelstein reaction), ability to disperse lime soap, and complex with alkali metal cations. Applications for emulsion polymerization, surface-active properties, stability consts. of complexes with alkali metal ions, and solubilization of alkali metal picrates in organic solvents were studied.

IT 138487-16-8P 138487-17-9P 138487-18-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and surfactant properties of)

RN 138487-16-8 CAPLUS

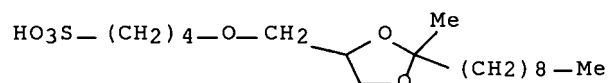
CN 1-Butanesulfonic acid, 4-[(2-methyl-2-undecyl-1,3-dioxolan-4-yl)methoxy]-,
sodium salt (9CI) (CA INDEX NAME)



● Na

RN 138487-17-9 CAPLUS

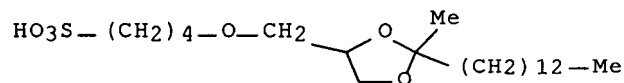
CN 1-Butanesulfonic acid, 4-[(2-methyl-2-nonyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 138487-18-0 CAPLUS

CN 1-Butanesulfonic acid, 4-[(2-methyl-2-tridecyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

L22 ANSWER 30 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1993:194040 CAPLUS Full-text

DOCUMENT NUMBER: 118:194040

TITLE: Synthesis and characterization of single-chain second generation cleavable surfactants

AUTHOR(S): Jaeger, David A.; Sayed, Yasmin M.

CORPORATE SOURCE: Dep. Chem., Univ. Wyoming, Laramie, WY, 82071, USA

SOURCE: Journal of Organic Chemistry (1993), 58(9), 2619-27

CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 118:194040

ED Entered STN: 14 May 1993

AB Three series of single-chain, second generation cleavable surfactants based on trans-[8-(2,2-dialkyl-5-octyl-1,3-dioxolan-4-yl)octane-2-sulfate (alkyl = Me, Et, Pr, Bu) were prepared. They were characterized by critical micelle concentration, Krafft temperature, and dynamic laser light scattering.

measurements. Acid-catalyzed hydrolysis of the surfactants gives (threo-9,10-dihydroxyoctadecyl)trimethylammonium methanesulfonate, Na and triethanolammonium threo-9,10-dihydroxyoctadecane-1-sulfate, and a dialkyl ketone. Cleavage of these surfactants thus gives another surfactant, with a higher critical micelle concentration, and a H₂O-soluble neutral compound. Triethanolammonium surfactants were .apprx.20 times more reactive than methanesulfonate surfactants.

IT 146575-93-1P 146669-62-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and surfactant properties of)

RN 146575-93-1 CAPLUS

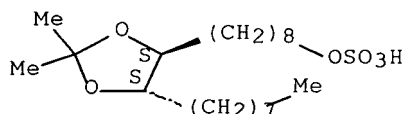
CN 1,3-Dioxolane-4-octanol, 2,2-dimethyl-5-octyl-, hydrogen sulfate, trans-,
compd. with 2,2',2''-nitrilotris[ethanol] (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 146575-92-0

CMF C21 H42 O6 S

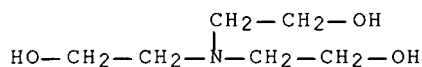
Relative stereochemistry.



CM 2

CRN 102-71-6

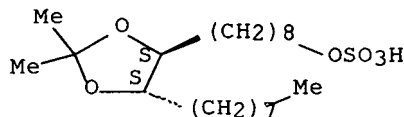
CMF C6 H15 N O3



RN 146669-62-7 CAPLUS

CN 1,3-Dioxolane-4-octanol, 2,2-dimethyl-5-octyl-, hydrogen sulfate, sodium
salt, trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.



● Na

L22 ANSWER 31 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1992:533335 CAPLUS Full-text

DOCUMENT NUMBER: 117:133335

TITLE: Chemical structure and surface activity. XXV.
Synthesis and surface properties of chemodegradable
anionic surfactants: sodium salts of sulfated
2-n-alkyl-5-hydroxymethyl-5-methyl-1,3-dioxanes

AUTHOR(S): Sokolowski, Adam; Piasecki, Andrzej; Burczyk, Bogdan

CORPORATE SOURCE: Inst. Org. Polym. Technol., Tech. Univ. Wroclaw,
Wroclaw, 50-370, Pol.SOURCE: Journal of the American Oil Chemists' Society (
1992), 69(7), 633-8

CODEN: JAOCA7; ISSN: 0003-021X

DOCUMENT TYPE: Journal

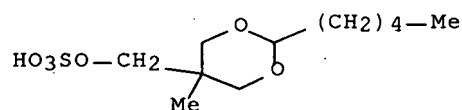
LANGUAGE: English

ED Entered STN: 04 Oct 1992

AB In acid-catalyzed reactions of Cn-alkanecarboxaldehydes (n = 5, 7, 9, 11) with MeC(CH₂OH)₃, 2-(n-alkyl)-5-(hydroxymethyl)-5-methyl-1,3-dioxanes were obtained. The dioxanes were sulfated with SO₃·pyridine complex in dry CCl₄ solution to obtain the title anionic surfactants. The surfactants could be readily hydrolyzed and oxidized to nonsurfactant compds. Phys. data and some surface properties, such as Krafft point, critical micelle concentration (CMC), surface tension of aqueous solution near CMC, and wetting and foaming properties, were determined. The surfactants exhibited aqueous solution properties similar to those of the well-known [R(OCH₂CH₂)_mOSO₃Na]. The presence of the 5-methyl-1,3-dioxane moiety in the mols. introduced hydrophobic character comparable to the effect of three oxyethylene groups or of two methylene groups of the alkyl chain in [R(OCH₂CH₂)_mOSO₃Na] with equal R value.

IT **143481-99-6P 143482-00-2P 143482-01-3P****143482-02-4P**RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and surfactant properties of)

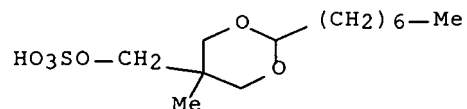
RN 143481-99-6 CAPLUS

CN 1,3-Dioxane-5-methanol, 5-methyl-2-pentyl-, hydrogen sulfate, sodium salt
(9CI) (CA INDEX NAME)

● Na

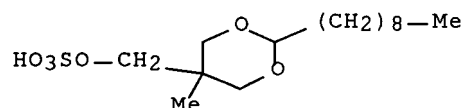
RN 143482-00-2 CAPLUS

CN 1,3-Dioxane-5-methanol, 2-heptyl-5-methyl-, hydrogen sulfate, sodium salt
(9CI) (CA INDEX NAME)



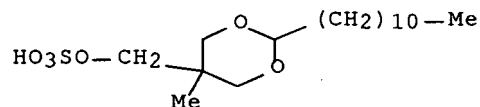
● Na

RN 143482-01-3 CAPLUS

CN 1,3-Dioxane-5-methanol, 5-methyl-2-nonyl-, hydrogen sulfate, sodium salt
(9CI) (CA INDEX NAME)

● Na

RN 143482-02-4 CAPLUS

CN 1,3-Dioxane-5-methanol, 5-methyl-2-undecyl-, hydrogen sulfate, sodium salt
(9CI) (CA INDEX NAME)

● Na

L22 ANSWER 32 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1992:215135 CAPLUS Full-text

DOCUMENT NUMBER: 116:215135

TITLE: Preparation of butadiene copolymers with low metal content

INVENTOR(S): Kasai, Kiyoshi; Sato, Hozumi; Takeda, Tokuji;
Yamamura, Shingo; Nakamura, Masaki

PATENT ASSIGNEE(S): Japan Synthetic Rubber Co., Ltd., Japan; Osaka, City of

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: **Patent**

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	----	-----	-----

JP 03281602 A 19911212 JP 1990-81148 19900330 <--
 PRIORITY APPLN. INFO.: JP 1990-81148 19900330 <--

ED Entered STN: 31 May 1992

AB The title polymers having metal content ≤ 200 ppm, and useful in the electronic applications, are prepared by emulsion polymerization in the presence of acid-hydrolyzable surfactants bearing 1,3-dioxolane rings. Thus, emulsion polymerization of 65 parts butadiene with 35 parts acrylonitrile in the presence of 2 parts 2-methyl-2-undecyl-3-carboxy-5-methyl-1,3-dioxolane Na salt (I), and 0.01 part Na hydroxymethanesulfonate and treating the resulting polymer emulsions with 1% HCl gave polymers containing 15 ppm Na, vs 120 for polymers prepared without I.

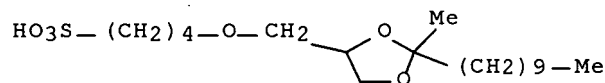
IT 141186-39-2

RL: USES (Uses)

(surfactants, for manufacture of butadiene copolymers with low metal content)

RN 141186-39-2 CAPLUS

CN 1-Butanesulfonic acid, 4-[(2-decyl-2-methyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



L22 ANSWER 33 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1992:151685 CAPLUS Full-text

DOCUMENT NUMBER: 116:151685

TITLE: Acetals and ethers. XXI. Preparation of diastereomerically pure sodium salts of sulfated 2-n-alkyl-5-hydroxymethyl-5-methyl-1,3-dioxanes

AUTHOR(S): Piasecki, Andrzej

CORPORATE SOURCE: Inst. Org. Polym. Technol., Tech. Univ. Wroclaw, Wroclaw, 50-370, Pol.

SOURCE: Synthetic Communications (1992), 22(3), 445-51

CODEN: SYNCAV; ISSN: 0039-7911

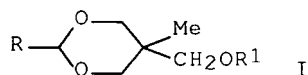
DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 116:151685

ED Entered STN: 17 Apr 1992

GI



AB cis-, trans- Or a mixture of cis- and trans-(hydroxymethyl)dioxanes I [R = 4-MeC₆H₄, Me(CH₂)₆, Me(CH₂)₈, Me(CH₂)₁₀, R₁ = H] were sulfated with sulfur trioxide-pyridine complex in CCl₄/pyridine to give I (R₁ = SO₃Na) as the pure cis- or trans-isomers.

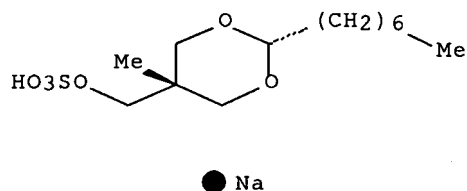
IT 139888-69-0P 139888-70-3P 139888-71-4P
139888-72-5P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 139888-69-0 CAPLUS

CN 1,3-Dioxane-5-methanol, 2-heptyl-5-methyl-, hydrogen sulfate, sodium salt,
cis- (9CI) (CA INDEX NAME)

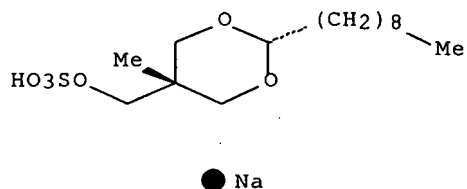
Relative stereochemistry.



RN 139888-70-3 CAPLUS

CN 1,3-Dioxane-5-methanol, 5-methyl-2-nonyl-, hydrogen sulfate, sodium salt,
cis- (9CI) (CA INDEX NAME)

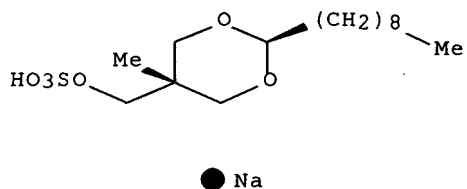
Relative stereochemistry.



RN 139888-71-4 CAPLUS

CN 1,3-Dioxane-5-methanol, 5-methyl-2-nonyl-, hydrogen sulfate, sodium salt,
trans- (9CI) (CA INDEX NAME)

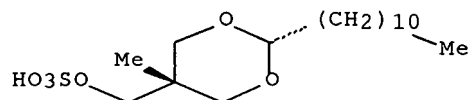
Relative stereochemistry.



RN 139888-72-5 CAPLUS

CN 1,3-Dioxane-5-methanol, 5-methyl-2-undecyl-, hydrogen sulfate, sodium
salt, cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.



● Na

L22 ANSWER 34 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1992:62074 CAPLUS Full-text

DOCUMENT NUMBER: 116:62074

TITLE: Synthesis and properties of destructible anionic surfactants with a 1,3-dioxolane ring and their use as emulsifier for emulsion polymerization

AUTHOR(S): Yamamura, Shingo; Nakamura, Masaki; Kasai, Kiyoshi; Sato, Hozumi; Takeda, Tokuji

CORPORATE SOURCE: Osaka Munic. Tech. Res. Inst., Osaka, 536, Japan

SOURCE: Yukagaku (1991), 40(11), 1002-6

CODEN: YKGKAM; ISSN: 0513-398X

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 21 Feb 1992

AB Degradable anionic surfactants with a 1,3-dioxolane ring were prepared and their surface properties determined. These surfactants contain a sulfonate group as the anionic hydrophile, and readily decompose under weakly acidic conditions. As surfactants for emulsion polymerization reactions, they are considerably superior to the conventional surfactants which give polymers containing higher contents of metals than the above surfactants.

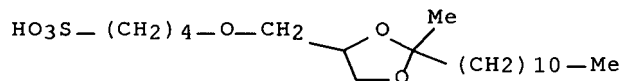
IT 138487-16-8P 138487-17-9P 138487-18-0P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(surfactants, preparation and surface properties of)

RN 138487-16-8 CAPLUS

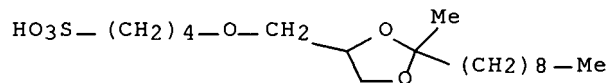
CN 1-Butanesulfonic acid, 4-[(2-methyl-2-undecyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

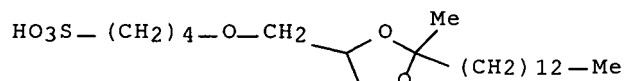
RN 138487-17-9 CAPLUS

CN 1-Butanesulfonic acid, 4-[(2-methyl-2-nonyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 138487-18-0 CAPLUS

CN 1-Butanesulfonic acid, 4-[(2-methyl-2-tridecyl-1,3-dioxolan-4-yl)methoxy]-
, sodium salt (9CI) (CA INDEX NAME)

● Na

L22 ANSWER 35 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1990:235732 CAPLUS Full-text

DOCUMENT NUMBER: 112:235732

TITLE: An efficient route to 3-deoxy-D-manno-2-octulosonic acid (KDO) derivatives via a 1,4-cyclic sulfate approach

AUTHOR(S): Van der Klein, P. A. M.; Boons, G. J. P. H.; Veeneman, G. H.; Van der Marel, G. A.; Van Boom, J. H.

CORPORATE SOURCE: Gorlaeus Lab., Leiden, 2300 RA, Neth.

SOURCE: Tetrahedron Letters (1989), 30(40), 5477-80

CODEN: TELEAY; ISSN: 0040-4039

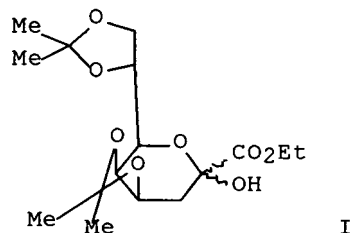
DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 112:235732

ED Entered STN: 23 Jun 1990

GI



AB Treatment of 2,3:5,6-di-O-isopropylidene-D-mannitol with thionyl chloride followed by oxidation gave the resp. 1,4-cyclic sulfate. Ring opening of the

cyclic sulfate with the anion of Et 1,3-dithiane-2-carboxylate, and subsequent acidolysis and unmasking of the thioketal, afforded KDO derivative I in an excellent yield.

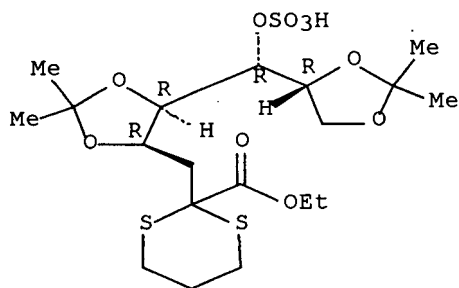
IT **127244-79-5P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrolysis of)

RN 127244-79-5 CAPLUS

CN D-manno-2-Octulosonic acid, 3-deoxy-4,5:7,8-bis-O-(1-methylethylidene)-, ethyl ester, cyclic 2-(1,3-propanediyl dithioacetal), hydrogen sulfate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L22 ANSWER 36 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1989:156549 CAPLUS Full-text

DOCUMENT NUMBER: 110:156549

TITLE: Preparation and characterization of glycerol-based cleavable surfactants and derived vesicles

AUTHOR(S): Jaeger, David A.; Jamrozik, Janusz; Golich, Timothy G.; Clennan, Malgorzata Wegrzyn; Mohebalian, Jamshid

CORPORATE SOURCE: Dep. Chem., Univ. Wyoming, Laramie, WY, 82071, USA

SOURCE: Journal of the American Chemical Society (1989), 111(8), 3001-6

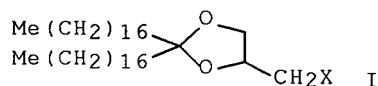
CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 30 Apr 1989

GI



AB Vesicles of I [X = N+Me3 MeSO3- (II); X = N+Me3 Br- (III); and X = O(CH2)3SO3-Na+ (IV)] were prepared by sonication and characterized by 1H NMR line width narrowing, dynamic laser light scattering, DSC, and dye entrapment and leakage studies. In vesicular form, the hydrolytic stability of IV was greater than that of II/III, due to a combination of electrostatic effects resulting from the different substituents on the dioxolane ring. Neutral organic compds.

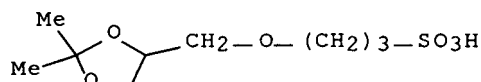
could be readily isolated from vesicular solns. of IV after its hydrolysis. Thus, IV was appropriate for the application of vesicular media to preparative chemical I ($X = N+Me_2(CH_2)_3SO_3^-$) was prepared but did not readily disperse in water upon sonication.

IT **119296-62-7P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrolysis of)

RN 119296-62-7 CAPLUS

CN 1-Propanesulfonic acid, 3-[(2,2-dimethyl-1,3-dioxolan-4-yl)methoxy]-, sodium salt (9CI) (CA INDEX NAME)



● Na

L22 ANSWER 37 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1987:156782 CAPLUS Full-text

DOCUMENT NUMBER: 106:156782

TITLE: Anticonvulsant O-alkyl sulfamates.

2,3:4,5-Bis-O-(1-methylethylidene)- β -D-fructopyranose sulfamate and related compounds

AUTHOR(S): Maryanoff, Bruce E.; Nortey, Samuel O.; Gardocki, Joseph F.; Shank, Richard P.; Dodgson, Susanna P.

CORPORATE SOURCE: Dep. Chem. Biol. Res., McNeil Pharm., Spring House, PA, 19477, USA

SOURCE: Journal of Medicinal Chemistry (1987), 30(5), 880-7

CODEN: JMCMAR; ISSN: 0022-2623

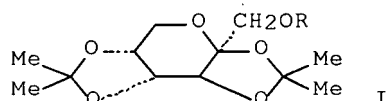
DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 106:156782

ED Entered STN: 15 May 1987

GI



AB The title compound [I; R = SO₂NH₂, topiramate, (II)], its analogs and related compds. were prepared mostly from the corresponding alcs. by either (1) treating the alc. with the appropriate sulfamoyl chloride in the presence of NaH, or (2) treating the alc. with SO₂Cl₂ in the presence of pyridine and treating the resultant chlorosulfate with an appropriate amine, or (3) treating the alc.-derived chlorosulfate with NaCN and reducing the resulting

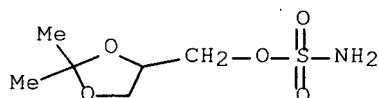
azidosulfate with Cu in MeOH or by catalytic hydrogenation with Pd/C. Thus, fructopyranose I (R = H) was treated with NaH and NH₂SO₂Cl in DMF to give 46% II. Most of the compds. prepared were tested for anticonvulsant activity. II showed potent anticonvulsant activity analogous to that of phenytoin. Structure-activity relationship is discussed.

IT **103596-21-0P**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation and anticonvulsant activity of)

RN 103596-21-0 CAPLUS

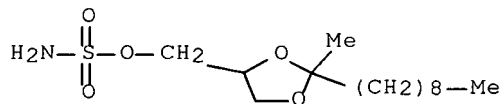
CN Sulfamic acid, (2,2-dimethyl-1,3-dioxolan-4-yl)methyl ester (CA INDEX NAME)

IT **103596-22-1P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 103596-22-1 CAPLUS

CN Sulfamic acid, (2-methyl-2-nonyl-1,3-dioxolan-4-yl)methyl ester (9CI) (CA INDEX NAME)

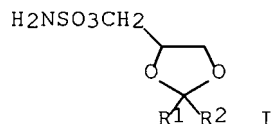


L22 ANSWER 38 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1986:478920 CAPLUS Full-text
 DOCUMENT NUMBER: 105:78920
 TITLE: Anticonvulsant dioxolanemethyl sulfamates
 INVENTOR(S): Maryanoff, Bruce E.; Nortey, Samuel O.
 PATENT ASSIGNEE(S): McNeilab, Inc., USA
 SOURCE: U.S., 5 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: **Patent**
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4591601	A	19860527	US 1985-722869	19850412 <--
JP 61263973	A	19861121	JP 1986-80274	19860409 <--
ES 553874	A1	19880101	ES 1986-553874	19860410 <--
CA 1252109	A1	19890404	CA 1986-506299	19860410 <--

Serial No.: 10/516,419

DK 8601675	A	19861013	DK 1986-1675	19860411 <--
AU 8656010	A	19861016	AU 1986-56010	19860411 <--
AU 579463	B2	19881124		
EP 198686	A2	19861022	EP 1986-302703	19860411 <--
EP 198686	A3	19871021		
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
ZA 8602744	A	19871125	ZA 1986-2744	19860411 <--
PRIORITY APPLN. INFO.:			US 1985-722869	A 19850412 <--
OTHER SOURCE(S):	CASREACT 105:78920; MARPAT 105:78920			
ED Entered STN:	06 Sep 1986			
GI				

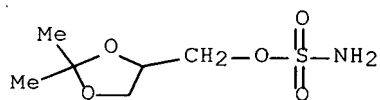


AB Title compds. I (R1, R2 = alkyl; R1R2 = alkylene), useful as anticonvulsants, were prepared 2,2-Dimethyl-1,3-dioxolane-4-methanol was treated with NaH and H2NSO2Cl in DMF to give I (R1 = R2 = Me), which blocked the tonic extensor seizure caused by application of an elec. shock to mice via corneal electrodes with ED50 = 104.9 mg/kg, i.p.

IT **103596-21-0P 103596-23-2P**
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (preparation of, as anticonvulsant)

RN 103596-21-0 CAPLUS

CN Sulfamic acid, (2,2-dimethyl-1,3-dioxolan-4-yl)methyl ester (CA INDEX NAME)



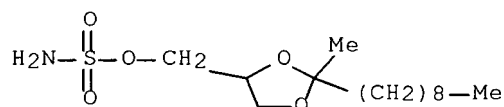
RN 103596-23-2 CAPLUS

CN Sulfamic acid, (2-methyl-2-nonyl-1,3-dioxolan-4-yl)methyl ester, compd. with 2-undecanone (10:1) (9CI) (CA INDEX NAME)

CM 1

CRN 103596-22-1

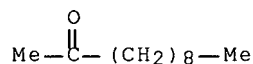
CMF C14 H29 N O5 S



CM 2

CRN 112-12-9

CMF C11 H22 O



L22 ANSWER 39 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1983:107200 CAPLUS Full-text

DOCUMENT NUMBER: 98:107200

TITLE: Cyanine dyes, new potent antitumor agents

AUTHOR(S): Minami, Isao; Kozai, Yoshio; Nomura, Hiroaki; Tashiro, Tazuko

CORPORATE SOURCE: Cent. Res. Div., Takeda Chem. Ind. Ltd., Osaka, 532, Japan

SOURCE: Chemical & Pharmaceutical Bulletin (1982), 30(9), 3106-20

CODEN: CPBTAL; ISSN: 0009-2363

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 98:107200

ED Entered STN: 12 May 1984

AB A number of cyanines with mono-, di- and tricyclic nuclei, merocyanines and oxonols were prepared and screened for antitumor activity against P388 leukemia and B16 melanoma. Among these compds., monomethin-, trimethin- and pentamethincyanines having naphthothiazole, naphthoxazole, and benzindole nuclei significantly prolonged the survival time of tumor-bearing mice. Replacement of the conjugated chain system between the 2 nuclei with a saturated aliphatic chain produced a marked decrease in the antitumor activity. Structure-activity relationships are discussed.

IT 84834-19-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction of, with methlthionaphthothiazolium salt)

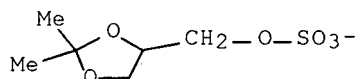
RN 84834-19-5 CAPLUS

CN Naphtho[2,1-d]thiazolium, 3-[(2,2-dimethyl-1,3-dioxolan-4-yl)methyl]-2-methyl-, (2,2-dimethyl-1,3-dioxolan-4-yl)methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 84834-18-4

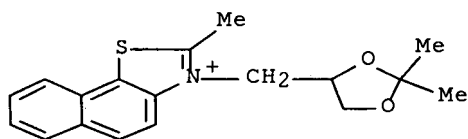
CMF C6 H11 O6 S



CM 2

CRN 84834-17-3

CMF C18 H20 N O2 S



IT **84846-66-2P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction of, with methylnaphthothiazolium salt)

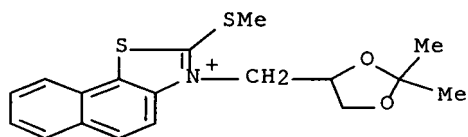
RN 84846-66-2 CAPLUS

CN Naphtho[2,1-d]thiazolium, 3-[(2,2-dimethyl-1,3-dioxolan-4-yl)methyl]-2-(methylthio)-, (2,2-dimethyl-1,3-dioxolan-4-yl)methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 84846-65-1

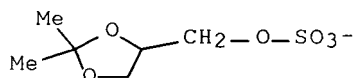
CMF C18 H20 N O2 S2



CM 2

CRN 84834-18-4

CMF C6 H11 O6 S

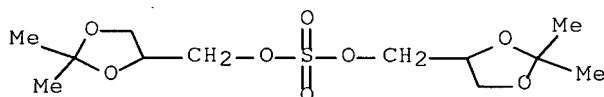


IT **84833-76-1P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and reaction of, with naphthothiazoles)

RN 84833-76-1 CAPLUS

CN 1,3-Dioxolane-4-methanol, 2,2-dimethyl-, sulfate (2:1) (9CI) (CA INDEX
NAME)



L22 ANSWER 40 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1976:407606 CAPLUS Full-text

DOCUMENT NUMBER: 85:7606

TITLE: Dioxolane derivatives having surfactant properties

INVENTOR(S): McCoy, David R.

PATENT ASSIGNEE(S): Texaco Inc., USA

SOURCE: U.S., 6 pp.

CODEN: USXXAM

DOCUMENT TYPE: **Patent**

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3948953	A	19760406	US 1969-847729	19690805 <--
US 3909460	A	19750930	US 1973-387426	19730810 <--
			US 1969-847729	A2 19690805 <--

PRIORITY APPLN. INFO.:

ED Entered STN: 12 May 1984

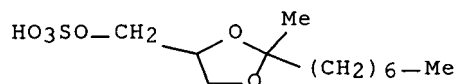
AB The reaction of glycerol [56-81-5] with C7-15 aliphatic ketones gave 2,2-dialkyl-4-hydroxymethyl-1,3-dioxolanes which were ethoxylated, sulfated (with 1:1 molar ClSO₃H-Et₂O [59263-80-8]), or phosphorylated with POCl₃ to prepare surfactants with higher detergency than com. ethoxylated alcs. or sulfates of ethoxylated alcs. Thus, a mixture of glycerol 137, p-MeC₆H₄SO₃H 5, benzene 500, and C10-15 aliphatic ketones 260 parts was heated 65 hr to prepare a mixture of 2,2-dialkyl-4-hydroxymethyl-1,3-dioxolanes which were mixed with 1% KOH and treated with ethylene oxide [75-21-8] (5.3 moles/mole dioxolane) to prepare a surfactant.

IT **59263-78-4 59263-79-5**

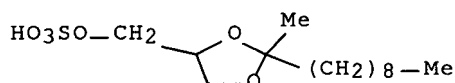
RL: USES (Uses)
(detergents)

RN 59263-78-4 CAPLUS

CN 1,3-Dioxolane-4-methanol, 2-heptyl-2-methyl-, hydrogen sulfate, ammonium
salt (9CI) (CA INDEX NAME)

● NH₃

RN 59263-79-5 CAPLUS
 CN 1,3-Dioxolane-4-methanol, 2-methyl-2-nonyl-, hydrogen sulfate, ammonium salt (9CI) (CA INDEX NAME)

● NH₃

L22 ANSWER 41 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1975:607840 CAPLUS Full-text
 DOCUMENT NUMBER: 83:207840
 TITLE: Detergent compositions containing dioxolanes as surfactants
 INVENTOR(S): McCoy, David R.
 PATENT ASSIGNEE(S): Texaco Inc., USA
 SOURCE: U.S., 6 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: **Patent**
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3909460	A	19750930	US 1973-387426	19730810 <--
US 3948953	A	19760406	US 1969-847729	19690805 <--
			US 1969-847729	A2 19690805 <--

PRIORITY APPLN. INFO.:

ED Entered STN: 12 May 1984

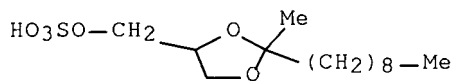
AB 2-Methyl-4-methylol-2-nonyl-1,3-dioxolane [6542-98-9] and similar 2,2-dialkyl 4-methylol-1,3-dioxolanes, prepared from glycerol [56-81-5] and C13-15 dialkyl ketones, were ethoxylated or sulfated to prepare surfactants with good solubility in water, good detergency in laundering, and light color. Thus, glycerol was condensed with C10-15 dialkyl ketones in benzene containing p-MeC6H4SO3H to prepare 2,2-dialkyl-4-methylol-1,3-dioxolanes which reacted with 5.2 moles ethylene oxide [75-21-8] to prepare a surfactant.

IT **57413-41-9**

RL: USES (Uses)
 (detergents)

RN 57413-41-9 CAPLUS

CN 1,3-Dioxolane-4-methanol, 2-methyl-2-nonyl-, hydrogen sulfate (9CI) (CA INDEX NAME)



L22 ANSWER 42 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1972:564761 CAPLUS Full-text
 DOCUMENT NUMBER: 77:164761
 TITLE: ω -(4-Phenyl-1-piperazinyl)alkane-1,2-diols
 INVENTOR(S): Hardie, Waldo Richard; Tankersley, Donald L.
 PATENT ASSIGNEE(S): Cutter Laboratories Inc.
 SOURCE: Ger. Offen., 16 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: **Patent**
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2210752	A	19720921	DE 1972-2210752	19720306 <--
US 3770743	A	19731106	US 1971-122144	19710308 <--
FR 2128713	A5	19721020	FR 1972-7923	19720307 <--
FR 2128713	B1	19750801		
GB 1336547	A	19731107	GB 1972-10550	19720307 <--
CA 1003837	A1	19770118	CA 1972-136438	19720307 <--
			US 1971-122144	A 19710308 <--

PRIORITY APPLN. INFO.:

ED Entered STN: 12 May 1984

GI For diagram(s), see printed CA Issue.

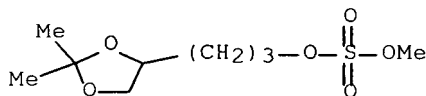
AB The title compds. [I, n = 3 (II), 4, 5] and (or) their salts with HCl or citric acid, useful as analgesics, spasmolytics, blood pressure lowering, and alpha adrenergic blocking drugs, were prepared by hydrolysis of the dioxolanes (III, R = Me, Et; R1 = Me, Ph). Thus, HOCH2CH-(OH)(CH2)3OH was refluxed with Me2CO to give 3-(2,2-di-methyl-1,3-dioxolan-4-yl)propanol, which was esterified with MeSO2Cl to give 3-(2,2-dimethyl-1,3-dioxolan-4-yl)propyl meth-anesulfonate. This was heated with 1-phenylpiperazine to give III (R = R1 = Me), which was refluxed with concentrated HCl in EtOH to give II.2HCl.

IT **37939-45-0P**

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

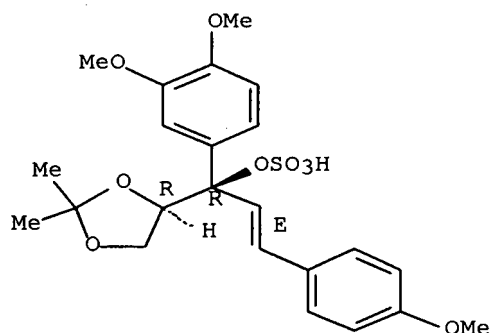
RN 37939-45-0 CAPLUS

CN Sulfuric acid, 3-(2,2-dimethyl-1,3-dioxolan-4-yl)propyl methyl ester (9CI)
 (CA INDEX NAME)



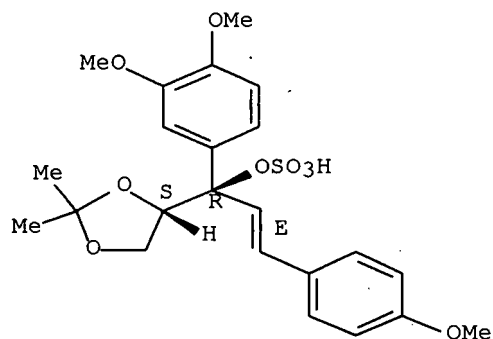
L22 ANSWER 43 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1972:551582 CAPLUS Full-text
 DOCUMENT NUMBER: 77:151582
 TITLE: Synthesis of (+-)-trimethylsequirin C alternative
 acid-catalyzed cyclization pathways for
 (+-)-trimethylsequirin C relatives
 AUTHOR(S): Davies, R. V.; Whiting, D. A.
 CORPORATE SOURCE: Dep. Chem., Univ. Nottingham, Nottingham, UK
 SOURCE: Tetrahedron Letters (1972), (36), 3849-52
 CODEN: TELEAY; ISSN: 0040-4039
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 ED Entered STN: 12 May 1984
 GI For diagram(s), see printed CA Issue.
 AB Trimethylsequirin C (I) was prepared by condensation of the dioxolane (II)
 with p-MeOC₆H₄C.tplbond.CH to give the acetylenic alc., which was reduced by
 LiAlH₄ to the olefin (III; R = OH). Further reduction of III (R = OSO₃H) gave
 III (R = H), which was hydrolyzed to I.
 IT **38340-02-2 38340-22-6**
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reduction of)
 RN 38340-02-2 CAPLUS
 CN 1,3-Dioxolane-4-methanol, α -(3,4-dimethoxyphenyl)- α -[2-(4-
 methoxyphenyl)ethenyl]-2,2-dimethyl-, hydrogen sulfate, [R*,R*-(E)]- (9CI)
 (CA INDEX NAME)

Relative stereochemistry.
 Double bond geometry as shown.



RN 38340-22-6 CAPLUS
 CN 1,3-Dioxolane-4-methanol, α -(3,4-dimethoxyphenyl)- α -[2-(4-
 methoxyphenyl)ethenyl]-2,2-dimethyl-, hydrogen sulfate, [R*,S*-(E)]- (9CI)
 (CA INDEX NAME)

Relative stereochemistry.
 Double bond geometry as shown.



L22 ANSWER 44 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1970:477158 CAPLUS Full-text

DOCUMENT NUMBER: 73:77158

TITLE: Cyclic glycerol acetals. III. Acetoxy-, chloro-, and benzoxyloxy acetals

AUTHOR(S): Gelas, Jacques

CORPORATE SOURCE: Lab. Chim. Org. 1, Fac. Sci., Clermont-Ferrand, Fr.

SOURCE: Bulletin de la Societe Chimique de France (1970), (6), 2349-54

CODEN: BSCFAS; ISSN: 0037-8968

DOCUMENT TYPE: Journal

LANGUAGE: French

ED Entered STN: 12 May 1984

GI For diagram(s), see printed CA Issue.

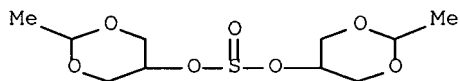
AB The acetylation, chlorination, and benzylation reactions of I (R = OH) and II (R = OH) were examined. I (R = OH) were treated with AcCl in pyridine to give the cis and trans isomers of I (R = OAc) while II (R = OH) similarly gave II (R = OAc). Similar treatment with SOCl₂ gave III. I (R = Cl) and II (R = Cl), were obtained by acetylating glycerol monochlorohydrin. Benzylation with BzCl in pyridine gave I (R = OBz) and II (R = OBz).

IT 15579-95-0P 15775-97-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

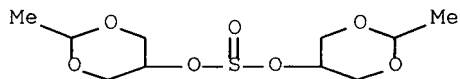
RN 15579-95-0 CAPLUS

CN m-Dioxan-5-ol, 2-methyl-, sulfite, cis- (8CI) (CA INDEX NAME)



RN 15775-97-0 CAPLUS

CN m-Dioxan-5-ol, 2-methyl-, sulfite, trans- (8CI) (CA INDEX NAME)



L22 ANSWER 45 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1970:64983 CAPLUS Full-text
 DOCUMENT NUMBER: 72:64983
 TITLE: Cytostatic sugar alcohol derivatives
 AUTHOR(S): Horvath, T.; Csanyi, E.; Vargha, L.
 CORPORATE SOURCE: Inst. Arzneimittelforsch., Budapest, Hung.
 SOURCE: Conf. Hung. Ther. Invest. Pharmacol., Soc. Pharmacol.
 Hung., 4th (1968), Meeting Date 1966,
 289-94. Editor(s): Dumbovich, B. Akad. Kiado:
 Budapest, Hung.
 CODEN: 21PFAR
 DOCUMENT TYPE: Conference
 LANGUAGE: German

ED Entered STN: 12 May 1984

AB The cytostatic activity of 1,2,5,6-tetramesyl-D-mannitol was lost when the hydroxyl groups at positions 3 and 4 were sulfonated. Other sulfonated sugar alcs. and thio-sugar alcs. were without activity. 1,6-Bis(phenylsulfonyl)-D-mannitol had activity which was lower than that of the analogous dimesyl compound

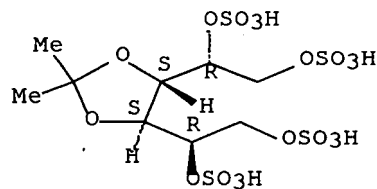
IT **28146-10-3**

RL: BIOL (Biological study)
 (neoplasm inhibition in relation to)

RN 28146-10-3 CAPLUS

CN Mannitol, 3,4-O-isopropylidene-, 1,2,5,6-tetrakis(hydrogen sulfate), tetrasodium salt, D- (8CI) (CA INDEX NAME)

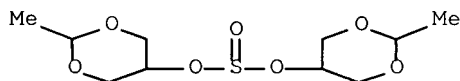
Absolute stereochemistry.



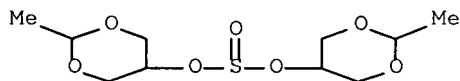
●4 Na

L22 ANSWER 46 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1967:473562 CAPLUS Full-text
 DOCUMENT NUMBER: 67:73562
 TITLE: Cyclic acetals of some glycerol chlorohydrins.
 Chlorination of glycerol cyclic acetals with thionyl chloride
 AUTHOR(S): Gelas, Jacques; Rambaud, Rene
 CORPORATE SOURCE: Fac. Sci., Clermont-Ferrand, Fr.
 SOURCE: Comptes Rendus des Seances de l'Academie des Sciences,
 Serie C: Sciences Chimiques (1967),
 264(21), 1700-3
 CODEN: CHDCAQ; ISSN: 0567-6541
 DOCUMENT TYPE: Journal
 LANGUAGE: French

ED Entered STN: 12 May.1984
 GI For diagram(s), see printed CA Issue.
 AB Azeotropic distillation of the C₆H₆ solution of glycerol α -monohydrochloride and paraldehyde in the presence of p-HO₃SC₆H₄Me gave cis-4-(chloromethyl)-2-methyl-1,3-dioxolane (I) and the trans isomer (II), which could be differentiated by the N.M.R. spectra. The structure was determined by chlorination with SOCl₂ in pyridine of the stereoisomeric hydroxyl compds. with known configuration. Acetalization of sym-glycerol hydrochloride with paraldehyde in the presence of p-HO₃SC₆H₄Me gave cis-5-chloro-2-methyl-1,3-dioxane (III), b₁₂ 41°, d₂₂₄ 1.152, n_{22D} 1.4375, and the trans isomer (IV), b₁₂ 75°, d₂₂₄ 1.195, n_{22D} 1.4556. Chlorination with SOCl₂ in pyridine of the 4 isomeric hydroxyl compds. formed from glycerol and paraldehyde gave I, II, III, and IV and the distillation residue gave V, m. 116-17°, and VI, m. 95-6° (petroleum ether-C₆H₆).
 IT **15579-95-0P 15775-97-0P**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 15579-95-0 CAPLUS
 CN m-Dioxan-5-ol, 2-methyl-, sulfite, cis- (8CI) (CA INDEX NAME)



RN 15775-97-0 CAPLUS
 CN m-Dioxan-5-ol, 2-methyl-, sulfite, trans- (8CI) (CA INDEX NAME)

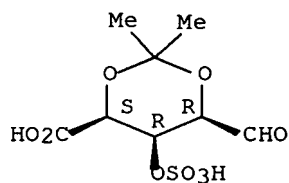


L22 ANSWER 47 OF 47 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1932:18189 CAPLUS Full-text
 DOCUMENT NUMBER: 26:18189
 ORIGINAL REFERENCE NO.: 26:1900f-i
 TITLE: Model experiments on the theory of alcoholic fermentation. VI. Oxidation of mono- and diacetoneglucose and of monoacetoneglucose-3-sulfuric acid
 AUTHOR(S): Ohle, Heinz; Couticos, Georg; Gonzalez, Francisco Garcia y
 SOURCE: Berichte der Deutschen Chemischen Gesellschaft [Abteilung] B: Abhandlungen (1931), 64B, 2810-3
 CODEN: BDCBAD; ISSN: 0365-9488
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 ED Entered STN: 16 Dec 2001
 AB It had been found that 3,6-anhydroacetoneglucose with KMnO₄ in initially neutral solution gives considerable acetone-d-xyluronic acid (I).

Acetoneglucose (II) behaves in the same way and acetoneglucose-3-sulfuric acid (III) gives acetoneglucose-3-sulfuric acid (IV). The introduction of the H₂SO₄ residue changes the behavior of II in the sense that 1 point of attack by the oxidizing agent, viz., the 3-HO group, is closed, but simultaneously the vulnerability of IV, as compared with the mother substance, is increased; with 2 and 6 atoms O, only 15 and 35%, resp., of the K salt of IV were obtained. In diacetoneglucose, the 3-HO group is the favored point of attack and only a little I is formed, as was indicated by the oxidation curve and confirmed by preparative expts. Optically active substances are still obtained with 12 atoms O; this indicates that the Me₂C group is involved in the oxidation. The oxidation curve of diacetoneglucose-3-sulfuric acid (V) showed no great difference from the mother substance and no preparative expts. were run on this compound. In the oxidation of these glucose derivs., then, there is neither a formation of stable hemiacetals nor a saccharinic acid rearrangement. K salt of I (28% from II and 2 N KMnO₄ (4.5 atoms O) at room temperature [α]D₂₀ -52.56° (water). K salt of V, prisms with 2.5 H₂O from absolute EtOH-benzine, [α]D₂₀ -13.17° (water, c 4.792), loses 2 mols. H₂O in vacuo over P₂O₅ at 100° and then decomp. 185-95°. III is obtained by crystallizing the pyridine salt of V from alc. or decomposing the K salt with N H₂SO₄ at room temperature; its K salt shows [α]D₂₀ -14.56° (water, c 7.013). Di-K salt of IV, needles with 2 H₂O, [α]D₂₀ (anhydrous) -36.94°, also obtained from the K salt of I with pyridinium-N-sulfonic acid in pyridine.

IT **879278-94-1P**, Xyluronic-3-sulfuric acid, acetone-, dipotassium salt **879278-96-3P**, Xyluronic-3-sulfuric acid, acetone-
 RL: PREP (Preparation)
 (preparation of)
 RN 879278-94-1 CAPLUS
 CN Xyluronic-3-sulfuric acid, acetone-, dipotassium salt (3CI) (CA INDEX NAME)

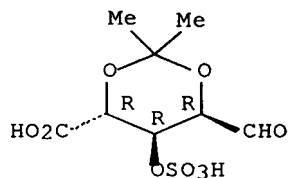
Relative stereochemistry.



●2 K

RN 879278-96-3 CAPLUS
 CN Xyluronic-3-sulfuric acid, acetone- (3CI) (CA INDEX NAME)

Relative stereochemistry.



Search History

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          BI OR 56-81-5/BI OR 593-08-8/BI)
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L7          STRUCTURE UPLOADED
L8          50 SEA SSS SAM L7

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L14        2477 SEA ABB=ON  PLU=ON  RUSSELL R?/AU
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